THE CONCEPT OF A VOCATIONAL DEVELOPMENT SCHEME

INCLUDING: An Outline of Vocational Development

: The development and initial testing of a program for a computer administered Vocational Interests Guide

: A survey of perception of vocational interests of school leaving-age children

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for QUICKIES PSYCLE REPAIRS

May your cogs never rust

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Murray Simmonds and Ken Strongman

The inhabitants at the back of L214

My Parents

And, Mostly, Sara.

Thank You

For Supervision, Philosophy, Sport, Support and the occasional Kick in the Pants.

Also, many thanks to

All the schools and pupils who made gathering data much easier than was expected.

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ABSTRACT

The thesis is an investigation of Vocational Guidance and the use of vocational interests measures. This takes the form of two parts.

Part One presents a view of Vocational Guidance, its place in the economy, and an outline of the framework of Vocational Development. Also presented is the form Guidance and Development should take in the future in New Zealand.

Part Two is an investigation into the use of Vocational Interest measurement. Some confusion exists among administrators as to who to administer such measures. A survey was designed to measure discrepancies between perceived and measured interests, and given to a sample of secondary school pupils. Multiple Regression and Discriminant Analysis showed no strong predictors of the discrepancy from biographical data. One feature of an interests measure which was noted, however, was that, even without feedback, completion of the A.P.U. Interests Guide resulted in a significant change in the measured perception of interests.

The thesis also discusses the adaption of a A.P.U. for computer administration, outlining the development of the program. A small sample showed no real difference in the split-half reliability of the measure after the adaption.

INTRODUCTION

The idea for this thesis was conceived on reading the New Zealand Planning Council's 1980 report on active employment policy. On Page 35 of that report in the section on Placement and Counselling Services is a recommendation for the extended use of 'modern information processing facilities'. The Report refers mainly to information retrieval and exchange, yet it is apparent that such limited use of these facilities would be a waste of valuable technology. Speculation lead to a questioning of the role of such services in the wider field of personal, career, and educational development. The use of an integrated vocational development scheme is investigated in addition to the use of processing facilities.

Initial reading demonstrated how little Vocational Guidance should now resemble the one-off 'round peg in a round hole' approach of traditional guidance. This approach was applied at the end of academic education and the beginning of working life, if at all. Recent literature suggests that Vocational Guidance is an integration of three interwoven processes.

First, there is an information gathering process, which includes the development of personality, values, ambitions, and interests, as well as accumulation of practical and academic knowledge. Second, a major decision period, where, on the basis of all facets of the information gained, choice of a career is made. Third, the development of that career, as a part of an individual's lifestyle, involving constant reassessment of the original decision in

the light of personal and external circumstances. The operation of the forces acting on the Second and Third processes are presented in the model of O'Neil, (1980), developed from the theories and research of many vocational writers. The Second and Third processes are distinguished by the magnitude of the initial decision, and by the constant re-evaluation based on dynamic forces. Thus, the vocational development concept is the amalgam of these three processes and involves two major elements, the collection and the utilisation of information. Part One of this thesis is constructed to outline the parameters of a career education and development scheme.

Acknowledging the folly of attempting to verify such a scheme in a Masters Thesis, Part One examines the practicality of applying the theory to the real world, in a form practically useful to all. The endeavour is enhanced by the educational aspects inherent in the scheme proposed.

Research is possible, in the short time available, only in the more concrete areas of Part One, for example, educational schemes create problems that involve not only long term research, practical, and administrational factors, but also the sometimes heavy hands of syllabus and curriculum planners. Planning in these areas involves the integration of research and the other factors into already established practice. The third process of vocational development, the re-evaluation of vocational decision, is also susceptible to planning problems, mainly in the task of integration many varying present practices and research into a form acceptable to all users. The groundwork for the information needed by the individual for the third process

is laid in the first and second processes. Thus, the second process, decision making, is the appropriate field to investigate here, and is where the most useful contribution of modern processing facilities may be made.

The use of such facilities to aid guidance services led to the development of a program which would allow computer administration of an interests inventory. The preliminary testing of this program is described in Chapter Four, and Appendix One contains notes on the development of the program, as well as a listing appropriate for use with a TRS-80 microprocesser system. Chapter Three involves an investigation in the use of interest inventories. Research is described on ascertaining the perception of interests by school leaving age students. The chapter also discusses the difficulty of obtaining a sample of unemployed from this age group.

INTRODUCTION TO PART ONE

Part One contains two chapters, the first dealing with New Zealand employment, the place of guidance services in this, and recent trends in guidance theory; the second outlining the parameters of an integrated guidance/job bank scheme.

The economic synopsis in Chapter One is based on the views presented in the New Zealand Planning Council's Report No. 17. It is included as an indicator of the basic causes behind the present employment situation. Criticism may be leveled at the naivety of this approach, yet the emphasis is laid on basics, not the political machinations (of any persuasion) which may or may not have promoted or delayed the action of any of the causal factors.

The educational guidance information is not to be found in journal or text. This information, presented in Chapter Two, was gathered during conversations with school counsellors, and by a much appreciated session with Mr Gerald Thompson of the Vocational Guidance Service of the Labour Department in Christchurch. A full summary of the details involved is available in the Appendices, although it must be made clear that this programme is subject to variation in individual schools.

CHAPTER ONE

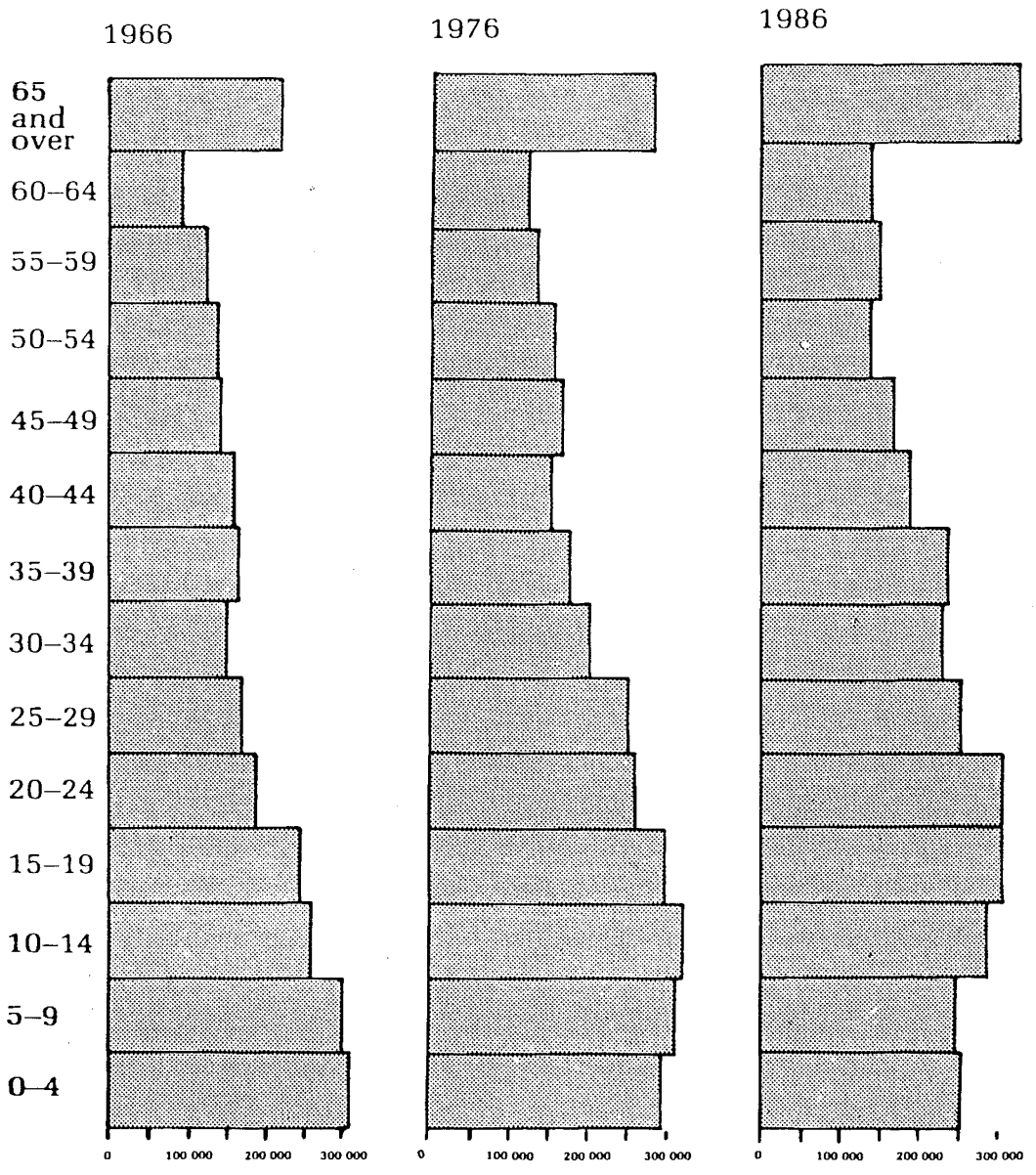
EMPLOYMENT IN NEW ZEALAND

The following synopsis of New Zealand's economic and employment situation is drawn from the New Zealand Planning Council's 1980 Report on active employment.

The growth of the labour force in this country, over recent years, has exceeded the growth of employment. Two factors can be traced as the main sources of an increase in the labour force. That part of the population now entering the labour force, born between 1951 and 1965, is what is referred to as a baby bulge. Fig. 1, overleaf, reproduced from the N.Z.P.C. report, shows that those at the peak of this bulge are now aged between 15 and 25 years. There is also an increasing participation of women in the work force, the result of changing social and legislative attitudes as well as increasing economic pressures on the family. This is shown in Table 1, drawn from the same source.

These two factors are internal sources of the employment deficit. However, they are not completely responsible for the low rate of employment growth in New Zealand. The rate of growth is not dropping, as annual reduction of jobs in the private sector is met by over-growth in the public sector. The employment growth rate has been low since the Second World War, as has the growth of the labour force. For example, between 1961, and 1976 the labour force grew at an average rate of two percent per annum.

FIG. 1 POPULATION BY AGE-GROUPS



Source: 1966, 1976: Census.
1986: Low immigration assumption in N.Z. Population and Labour Force Projection 1979-2011 (Base: 31 March 1978), Department of Statistics.

TABLE 1

Males and Females in Surveyed Employment[1]

	1971–1979			1974–1979		
	Total Increase ('000)	Average Annual Increase ('000)	Average Annual Rate of Growth (percent)	Total Increase ('000)	Average Annual Increase ('000)	Average Annual Rate of Growth (percent)
Male	45.9	5.7	1.0	6.6	1.3	0.2
Full-time[2]	41.1	5.1	0.9	6.2	1.2	0.2
Part-time	4.8	0.6	1.9	0.4	0.1	0.2
Female	100.6	12.6	3.6	51.1	10.2	2.7
Full-time[2]	54.2	6.8	2.6	26.9	5.4	1.9
Part-time	46.4	5.8	6.9	24.2	4.8	5.0

Source: Half Yearly Employment Information Survey (April). Department of Labour.

[1]Rounding accounts for apparent small discrepancies in figures.
[2]Three-quarters or more of the scheduled ordinary time hours.

New Zealand's economic growth was also slow until the 1970's, though this was partially due to the agricultural basis of the economy. Up to the 1970's this moderate growth was able to accomodate a moderate population growth. As employment growth is a reflection of economic growth it too was low yet kept pace with both population and industry. However, during the 1970's several economic factors contributed to a fall in economic growth. This resulted from the agricultural sector receiving a declining share of the national income, reducing any expansion opportunities. A fall in terms of trade, with rises in the prices of imports, particularly oil, further reduced growth in our primary export industry. In turn, an increased balance of payments deficit occured.

At present, expansion of the overall economy is curbed by necessity of keeping overseas borrowing as low as possible. However, domestic inflation has led to a lack of business confidence, less investment, and a sagging labour market. Combined with these trends is a net outflow of skilled workers, a result of more attractive economies and labour markets outside this country. This means that a shortage of skilled workers exists in some areas of the work force, while unemployment, caused by the population growth outstripping employment growth, exists in others.

SOCIAL PLANNING AS AN AID TO THE ECONOMY

If the concept of full employment is to be retained by planners, it is necessary to aim for greater economic growth within the country. Economic manipulation can be

aided in the attempt to improve the economic growth curve by social planning.

Here, planners transcend the economic situation to the personal, looking at what can be done within the work force to improve the growth rate and lessen the deficit between jobs and the labour force. Changes can be introduced into the work - to pay dividends in terms of increased productivity (Glaser, 1980). These changes include worker participation, management by objectives, and industrial democracy. To the worker, the changes mean better conditions, more feedback, a say in the job, a chance to improve the process, or increased attractiveness of the job. From managerial, worker, and academic viewpoints, the objective is to improve the job satisfaction of the worker. Job satisfaction occurs when a worker accepts his work completely, where the job fits neatly the workers life, his interests, ambitions, values, abilities, and responsibilities.

The job is presenting to the worker more than the work ethic would lead him to expect. Charles Eliot, in his 'Content in Work' (1904) wrote:

> "..there can be no public happiness without.... satisfaction from the daily work of the masses of mankind".

This is not a reference to either full employment or job satisfaction. It is to the work ethic, a way of thinking which promotes the idea that work is satisfying in itself, a cleanliness-next-to-godliness like concept. As recently as 1980, Fizgerald and Crites wrote:

"It seems reasonable to assume that all individuals...share the basic human need of self-fulfillment through meaningful work."

but this work introduces a concept alien to the work ethic, that of meaningful work. This must be seen to be crucial to the individual if any change towards job satisfaction is to be successful. The concept of the work ethic passes over the fact that the search for meaningful work is an attempt to improve the quality of life. Work in its traditional form can no longer be considered as providing Candide's best of all possible worlds. Too many other factors also contribute to quality of life. The part played by quality of working life is important, as a worker who enjoys his work will tend to work better. Steers (1975) showed overall job performance to be related, in varying strengths, to job satisfaction. (The stronger relationships were found to be among groups with higher achievement motivation scores).

People look towards their goals in terms of the way their lives are structured, this being inclusive of their work. If work does not fulfill needs, meet expectations and ambitions, or match interests, then it does not conform to the desired quality of life. In this case, the concept of work ethic fails, the work itself is inadequate for the individual's fulfillment.

If the basis for such expectations of lifestyle is reasonable, the individual can look elsewhere for suitable employment. If not, experience should realistically adjust the lifestyle expectations. Such a theory may explain why schemes involving improvements to job satisfaction meet

approval with workers, as the workers are given a chance to mould work to their own lives. No doubt there are those who would argue that such reasoning ignores individual likes and dislikes which would render any changes collectively unsatisfactory. This has happened, with conflict between status positions negating attempts to introduce satisfaction programmes. Schemes which do succeed do so with good design and the aid of the homogeneity of work groups (Kuder 1977).

There can be little doubt that quality of working life is important, both to the individual and a depressed economy, and increased productivity is a first step to expansion. It is an investment by any economy to help people find the right job, even when unemployment exists. Furthermore, inadequate vocational information services can have undesirable effects. From the N.Z.P.C. report,

> "Overseas experience suggests that significant unemployment is attributable to a lack of adequate information about available jobs and poor communication between job seekers and placement personnel." p 34

Investigation in the area of the dissemination of vocational information attacks the unemployment problem from both ends. Chapter Two is devoted to examining that dissemination.

DYNAMIC VOCATIONAL GUIDANCE

An important part of the vocational information service is vocational guidance. Traditionally, this has taken a "round peg" approach, fitting the person to a job (Zytowski 1973). Until recently in this country, such an approach

has been applied between the end of academic schooling and the onslaught of the real world. This link has possibly been a young person's only contact with specific vocational information, apart from personal experience. In a world of increasingly specialised areas of work, sources of such experience may be limited to their own aquaintances, or those of their parents. Diversification of jobs could mean that areas of employment exist of which a person is not aware. Information provided over a few hours by a counsellor is not adequate.

McArthur and Stevens (1955), expressed doubts over the generalizability of the "peg in the hole" approach. Ginzberg (1971), when examining the testing-placing mode of counselling, echoed these doubts. Counsellors, subject to economic, numerical, and temporal pressures, may tend to give direction rather than guidance (p. 181). Further, lack of a base of information means some persons are not prepared to be guided, Zytowski (1973) suggesting that fitting a round peg in a round hole depends on the person's knowledge as well as the counsellor's. In traditional guidance it seems that no account is taken of the lack of knowledge on the part of the client is examined. There is also a conclusion that because the approach does not cater to certain areas of the population, people in these areas may not require guidance of any kind. (Zytowski, Slaney (1980)). Traditional guidance fails where development of an information base is formed on incorrect or incomplete data. The interview skill of the counsellor may not be sufficient to correctly analyse the information base, and correctly guide the client, within a short period of time. The conclusion that areas of the

population may not require guidance is not unfounded, but in light of uncertainty of the accuracy of the information base, which areas are these?

An individual's vocational development can be divided into three processes, the gathering of an information base, the choosing of an occupation, and the development of a career. Traditional guidance seems to forsake the first and third aspects. In recent years, this has changed, with the coming of a body of theory on Vocational Development. This approach spans both job choice and career development, and recognises the importance of the information base. Guidance based on this theory and traditional guidance differ in the dynamic nature of the former. Using the peg in the hole analogy, the difference can be illustrated thus:

The peg is the person, the shape defined by the interests, abilities, credentials, needs, personality and other aspects of that person. The hole is the job, shape delineated by pay, prospects, type of product, job description, social climate, the economy, and so on. Traditional guidance fits the peg to the hole when a person starts working. The developmental model takes account of the dynamic nature of both personal and employment-related factors. The round, seventeen year old peg may find that his family has altered his needs, that prospects have altered with a turn in business, that he is becoming older than the majority of his workmates. Work is no longer the centre of his life and no longer offers the satisfaction it once did. Now twenty nine, the peg is becoming square, the hole reshaping as triangular.

Levinson, 1978:

"Once his initial choice is made, a man must acquire occupational skills, values, and credentials. He must establish a more differentiated occupational identity, and establish himself within his chosen world. Along the way, he may fail or drop out, to begin again on a new path. He may stay narrowly within a single track, or try several directions before settling firmly on one."

This, then, is the process of career development.

WHAT FORM SHOULD GUIDANCE TAKE?

To stay within the bounds of such a process, it follows that guidance should be an aid to decision making, and not, as so often happened in traditional guidance, directive. Skills of decision making should be included in a person's information base to show how to make decisions, not which decision to make. Overall, this guidance should help recognition of alternatives. It is very similar in nature to non-directive counselling, a concept with a bad name. (Halmos, Ginzberg).[1] Such an approach was highly regarded into the mid sixties, based on the assumptions that an individual can decide what he wants out of life, and which values he holds in high and low esteem. Due to the inadequate data base, views then changed to regard such assumptions as unfounded, something circumstances would not allow. Halmos wrote:

1 From Ginzberg, 1971

> "No matter how much care is taken to allow people sponteneity of growth along the lines of their own choosing, it is simply not true that arbitrariness of influence on them can be avoided (Social and Economic) factors will inevitably limit the counsellors potential of behaving non-directively." Ginzberg p 100.

Ginzberg identifies a breed of "activist" counsellor, who seeks to bring about changes in the environment which he hopes will contribute to the sound growth and development of his clients. It is proposed that one identifies those systems or parts of systems which hinder free development, and instead make proposals which represent constructive development. While Halmos and Ginzberg believe that this approach is not non-directive, it definitely is. The change of the activist counsellor is ensuring the accuracy of the clients information base, and the counselling remains non-directive.

Stewart and Warnath describe non-directive counselling as assisting an individual to find a measure of reality from which he can receive feedback against which to check his self-evaluation (Ginzberg p 100). The changes of the activist set the scene for such an approach, ascertaining that the client has information to work on, and that he perceives the world realistically. The counsellor is directive only in imparting knowledge, and in the demonstration of the use of decision making techniques, rather than in making decisions for the client.

The counsellor is less integral to developmental theory than to traditional guidance. Research has reported the effectiveness of counsellor-free treatments (Atanasoff and Slaney 1980; Krivatsy and Magoon, 1976; and Avallone, 1974), such as self directed search, which are free of counsellor bias (Donahue and Coster, 1977; Thomas and Stewart, 1971). These treatments, however, are tools in aiding information gathering, and still need the hand of a counsellor. They leave the counsellor, however, free to move into areas of non-directive guidance, less subject to those pressures cited by Halmos.

SUMMARY

Both economic and social environments in New Zealand can benefit from good guidance and information services. The change in the perspective in which work is seen demands similar changes in guidance techniques. A system of information presentation will be discussed in Chapter Two.

CHAPTER TWO

INTRODUCTION: WHAT IS INFORMATION?

Vocational Development consists of three processes; information gathering, vocational choice, and career development. On close examination, two components become apparent, information collection and information utilisation. Information collection can be seen as accumulation of experience and knowledge. Crites (1969) reviewed factors that affect an individual's selection of a career.[1] He proposed a three part classification of variables, Stimulus, Organismic, and Response. Response can be said to be the result of the collection of Stimulus information and the action of Organismic on the individual.

To Stimulus belong such factors as experienced events, family background, geographical location, parental personality, and social interaction. Each could be traced as partial source of personal details such as religious beliefs, dietry considerations, and values. There is a degree of interaction between the three categories. For example, physique may be the Response to both Simulus and Organismic (or genetic) factors. However, physique may in turn be considered a stimulus or organismic variable in the development of interests. For each individual, the classification of a factor may differ.

1 See O'Neil, 1980

VOCATIONAL DECISION MAKING

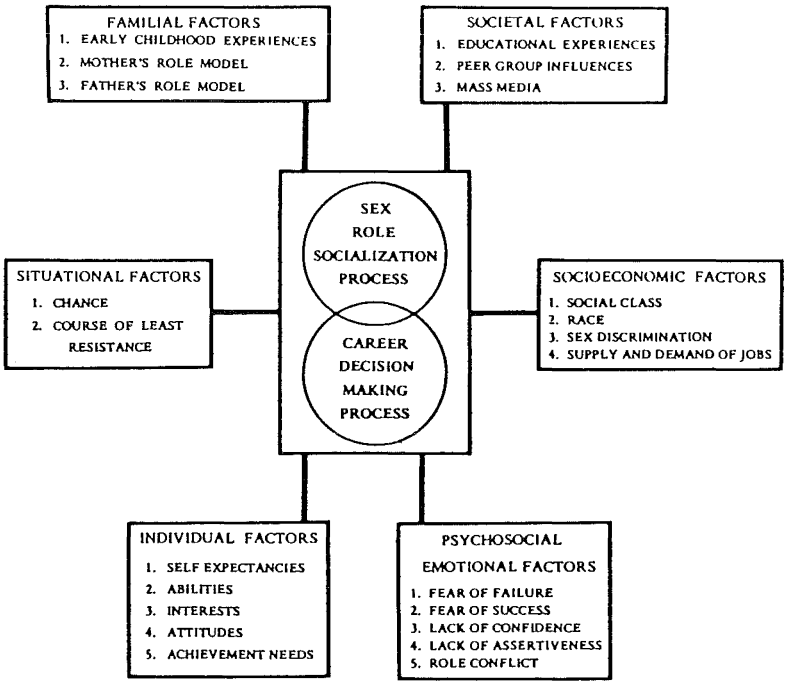
Vocational decision making may be seen as appraisal of knowledge in the light of specific vocational information. This gives an appraisal of one's needs, values, and interests in the light of prospects, pay, the labour market, and other factors. The decision making process is a re-appraisal of past decisions, changing weightings on factors, and looking at old information in the light of new.

The nature of decision making can be extended to information gathering. Collection of information begins with, if not before, birth. (Taking genetic factors as being individually constant). Re-appraisal, testing, and rejection of information takes place as soon as that information is used, and feedback takes place. A model of such development is presented by O'Neil and his colleagues, (1980). This model is based on career development theory, (Bordin, 1963; Holland, 1973; and Williamson, 1939), the social systems approach to career development (Osipow 1973), as well as work on correlates of career choice, social learning theory, and theories of sex role development.[1] O'Neil et al propose that the factors which effect sex role socialisation are those affecting the career decision making process. These factors are those which Crites labels Stimulus and Organismic, and Vocational Choice is a Result. Diagram One, overleaf, is a reproduction of the O'Neil model.

Given the nature of information gathering and decision making, it is to be assumed that if vocational decision making is to be accurate, the opportunity of exposure to vocational information must be as great as possible.

1 O'Neil - pg 356

FIGURE 2



Factors affecting the sex role socialization and career decision-making process. (From "Research on a Workshop to Reduce the Effects of Sexism and Sex Role Socialization on Women's Career Planning" by J. M. O'Neil, C. Ohlde, C. Barké, B. Prosser Gelwick, & N. Garfield, *Journal of Counseling Psychology*, 1980, 27, 355–363.)

This then, is the first parameter of any integrated scheme involving vocational development. The obvious medium for presentation of such information is the secondary school, where staff and resources are already available. Introduction or emphasis of vocational information within the curriculum would mean that problems of cost, staff, resources and availability are reduced, and that all members of the population have access to the information during their education.

PRESENTATION OF VOCATIONAL INFORMATION

The conditions which enable presentation to be a success are outlined by Ruff (1976), who worked with vocational education in Arizona. One important factor is the support of the legislature, in New Zealand this would mean approval and finance from the Departments of Labour and Education. Also necessary is support from business, industry, and labour. The latter is worth noting for its inclusion, as, in Ruff's study, the labour provided some 6,500 speakers, "to bring the world of work into the classroom of more than 375,000 students." Support through the enthusiasm and dedication of staff is essential. A further condition emphasised by Ruff is related to the philosophy assumed concerning evaluative data. These were used not only to prove the Arizona scheme, but also as feedback. This may be the best guarantor of success of any long running scheme, and must be regarded as a parameter. This is discussed in detail further on.

What type of information is to be offered? Super and

Bohn (1970) list a series of tasks necessary for a person seeking a career.[1] The type of information presented should aid the completion of these tasks, which are: Crystallizing a vocational preference, implementing it, stabilizing in the chosen vocation, consolidating one's status, and advancing in the occupation. Super distinguishes between the process of vocational development and the result of vocational adjustment. The information offered in the curriculum should enhance the process to help decision making towards the result. High, (1976) lists six goals ascertained on reviewing several career education projects. These goals should be able to be attained by a school leaver of any age.

1. Competance in the basic academic skills required for adaptability in our rapidly changing society.
2. Possession of a personally meaningful set of work values that foster a desire to work.
3. Possession of career decisions making skills, job hunting, and job getting, skills.
4. Possession of job specific occupational skills at a level that will allow them to gain entry into, and attain a degree of success in, the occupational society.
5. Possession of a degree of self-understanding and understanding of educational-vocational opportunities sufficient for making sound career decisions.
6. Awareness of means available to themselves for changing career options - of societal and personal constraints impinging on certain career alternatives.

1 From Tuck, 1976

The studies reviewed by High provide evidence that each goal is attainable. The Arizona study of Ruff, for instance, shows that exposure to career education;

- gave greater knowledge to the range of occupations available
- helped develop better understanding of educational awareness and educational requirements for jobs
- helped develop a better understanding of the skills and abilities required for certain occupations, as well as success skills
- helped understanding of economic rewards, and the lifestyle advantages and disadvantages of certain career choices.

One must take into account that certain significant areas of developmental theory are not yet fully understood. Karpicke (1980) reports theoretical and empirical evidence that suggests male and female career planning processes do not differ. Schneider et al (1980) argue that there are differences in the way that the male and female personality develops. Schneider's argument, if we follow the multiplicity of factors presented by O'Neil, counters the report of Karpicke. Such uncertainty in research cannot be ignored, and again, the importance of constant evaluation, research, and feedback is stressed.

VOCATIONAL INFORMATION PRESENTATION IN NEW ZEALAND

Information services in New Zealand are progressing towards High's goals. There is still need at present, though, for crash courses in vocational education. An example of this is provided at Pitcaithley House, in

Christchurch. Although funded through the education system, the centre prefers to remain non-scholastic in function and appearance. Attendance at a course is voluntary, and each course is conducted in such a way as to impose working conditions on the student. Thus, an onus of arriving on time, being neatly dressed, and being responsible and independent is placed on the student. Different schools are represented within each group, making social interaction a necessity, and meaning familiar support is not available. An emphasis is placed on presenting realistic, practically useful information to the student. Skills taught at the centre include interview techniques, how to apply for a job, the construction of a curriculum vitae, and personal responsibility. Use is made of repertory grid and an in-house counsellor to help foster self-awareness. This out-centre has an advantage in that students can be accommodated when they feel they want the information.

Vocational guidance in secondary education in this country is becoming very advanced, at least in the planning stage. Overleaf is a basic outline similar to that which vocational officers are working toward, reproduced by permission of its architect. While the extent of advancement of such programmes depends largely on individual schools, what is available here is comparible to schemes reported overseas. Information available includes a series of leaflets, on subjects ranging from accommodation in main centres through to working with wool. These leaflets are constantly being updated, the earliest listed on the April 1981 index being 1973, with less than 5% of some 240 titles

A CAREER EDUCATION PROGRAMME IN ACTION

	FORM 3	FORM 4	FORM 5	FORMS 6-7	
CAREER ORIENTED TEACHING UNITS/TOPICS	ORIENTATION - To school and secondary schooling - To community and local work world	WORLD OF WORK - including Beginnings in self-knowledge Work aspirations/ expectations Functions of work Occupational interests Trends in youth employment Tentative goal-setting (Linked with social studies CHANGE topics: technology, unions, women)	WORKLIFE IN CHANGE Work-related values Career = ? Work/non work/ leisure Unemployment/ retraining Equal opportunity Disabled/minorities	TRANSITION KNOWLEDGE/SKILLS Examinations Further learning/ training options School-leaver "market" Decision-making	SELF-DIRECTION Tertiary study Vocational training Values clarification Decision-making
			GENERAL VOCATIONAL SKILLS - in subject courses		
CAREERS ADVISING PROGRAMME	"Introductions" - Class talks	Related to teaching unit Careers information Careers questions/answers Career strategies Individual help: follow up Self-report needs and Self-referral inquiries	Continued career exploring - Increasingly self-directed, with information and counselling as appropriate: Self-report/review Range of appropriate alternatives Goal-setting and tentative decisions		"Self-directed Search" Choice and opportunity (SPEED COP) Personal resumé
TUTORIAL PROGRAMME (Dean, Tutor, Form Teacher, Subject Teachers, GC, GT etc)	Orientation - at each form level ——→ Personal development and social skills —— Transition from school skills —— Social independence skills Study habits and methods —— Study skills : evaluation and instruction Subject sampling —— Subject choice - with increasing vocational implications				
EXTENSION PROGRAMMES	Extra-curricular: clubs, groups, sports etc : for skills, knowledge, interests, aptitudes Work Exploration ——→ Leisure and Recreation/Outdoor Education ——→				

G Thomson, Guidance Adviser - February 1981

older than three years. The Vocational Guidance Centre in Christchurch also runs seminars, for senior students, careers advisors, and vocational guidance counsellors, on topics normally unavailable to schools. For example, on Thursday 16th July 1981, a seminar on electronics and computer technology was run. Sheets announcing the date, venue, speakers and other details of these seminars are sent to local schools.

The first week of the May Vacation is a "careers" week for schools out of Christchurch. Students arrange an itinerary, and on arrival at the centre are given personalised instructions, including bus routes and addresses, and employers arrange a guided introduction to the occupation.

For the student, a tri-part publication called 'Looking Ahead' has been produced. This consists of a booklet on vocations, instructions and information, the link between school and work, about universities and bursaries etc. A second booklet is aimed at self awareness, containing exercises to be completed in conjunction with the reading of the main booklet. The third is a home guide, information for parents on how to aid a job seeker, and on how to obtain more information. These booklets also tie in with a teaching kit, including audio-visual material, and further resource references. A 'World of Work' careers unit has been designed for presentation to the fourth form, introducing careers and the basic facts of working life. This unit includes provision for dialogue between student and instructor, allowing questioning and feedback on self-awareness information. The basic outlines for this system are contained in the presented brief, while more detailed

information is presented in the Appendices.

This programme is an excellent example of provision of practical information stemming from both experience and theory. Often, however, one finds students of one age are not prepared to receive such material at the same time. Inclusion of self-awareness material brings the information to a personal level, hopefully helping to overcome this problem.

THE DECISION MAKING PROCESS

The second process of Vocational Development Decision Making, is dependent on the fullness of the information base of the individual for it's success. Modern trends dictate that the necessity of guidance be argued as part of this process. Atanasoff and Slaney (1980) produce evidence that the absence of a counsellor may eliminate sex bias (also Donahue and Coster, 1977; Thomas and Stewart, 1971), yet in the light of the research reviewed earlier, such elimination may be too advanced for society at present. Fizgerald and Crites (1980) argue that the rapid restructuring of women's societal role is often ahead of counselling techniques, and Closs (1979) mentions that discrimination in interest measurement yields, obstensibly, the best results. If technique is not based on bias, a good counsellor may use knowledge of sex differences to the client's advantage.

Atanasoff cites others (Krivatsy and Magoon, 1976; Avallone, 1974) to show that counsellor-free treatments such as self-directed-search (SDS) give favourable outcomes, comparable, if not better than, one-to-one counselling.

The paper does not state that, for many people, the SDS has to be demonstrated, explained, and the results interpreted. If this is the case, then the counsellor is also available if questions arise, and can help on the cue of a puzzled frown, or if further information is needed. He can also provide liaison with the workplace, information sources, and interpretation of counsellor free treatments. Price, Michal, and O'Neil (1978) developed a computerised SDS program, which aids clients in matching their summary codes, and, significantly, "assists the counsellor in interpreting the SDS."

Problems can arise when counsellors are expected to be both organisers and information sources, and sensitive guides. With a larger part of information handling given over to mechanisation, the strain on resources is reduced. (Butler and Dowsey, 1978, p 57). The computer can store and relate information repeatedly, with patience, accuracy and non-selectivity, working as an automated library and filing system with constant updating, (Ibid). This leaves the counsellor free to become a guide, helping appreciation of the importance of information, and assisting in the process of career planning. In this situation, the counsellor is aiding implementation, rather than exploration (Super, 1970).

There are those who will come from school or employment with no real concept of self-awareness, lacking knowledge of abilities, interests, or values. In this situation, V.D.U. administered guides could be used. These can take the form of integral programs such as Katz's SIGI, or the common objective tool of traditional guidance. For

those who scorn the place of traditional tests in developmental practice, Smith, Hartley and Stewart (1978) examine the use of Repertory Grids in Guidance, and Haase (1979) has developed a subjective choice and scaling technique, with weightings using work value ratings. It is possible that some counsellor resistance to V.D.U. administration may be encountered. Bringmann and Christian (1979) and Millar and Cochran (1979) have shown that the feedback of programmed tests elicits a more positive response from subjects and that costing is favourable. The SIGI program can aid the client by improving career maturity in only 3 weeks (Pyle and Stripling, 1976).

There are, though, two problems with such a scheme. The first is the data base, the establishing of which is the most important aspect of a computer operated system. If the information given is inaccurate or inadequate, the system will fall into disrepute. (Dowsey 1978). This constitutes a parameter for any guidance scheme, that all material must compile an adequate data base. Combining such a data base with a nationwide, comprehensive employment placement service would actually give complete reference to problem areas. On one hand, the placement services have information on what a job entails, on the other, guidance services have immediate feeback on areas where information is not present or complete. The geographical size of New Zealand, and the demographic patterns involved, make possible the nationwide job bank proposed in the N.Z.P.C. report (p 35).

Alteration of data is readily and rapidly completed where the data file is in constant use by the working world

as well as guidance services. This again draws attention to the importance of feedback. If employers are wary of using such a scheme, one suspects that common usage of facilities by graduates, students, and the general public, will, along with word of mouth recommendations, bring use.

The data base also needs to have the type of input taken into account. If, for example, guidance was using a system based on the homogeneity of personnel with an occupation (Kuder 1977), then the data base would accordingly be geared to those specifications. The use of the data base as a national job bank as well may make such guidance inconvenient, and more traditional methods may be used.

Input, then, may have to be matched to the data base. The SIGI system uses ten values which are given weightings in the style of the Repertory Grid method. Once original weightings are made, re-assessment is made, thus giving differing combinations of weightings. It is possible for the user here to investigate fully the outcomes of each combination. A drawback is the cost of computer hardware and software, though timesharing on a nationwide basis may bring these to acceptable levels. This drawback is possibly outweighed by the "overwhelmingly positive reaction" to tailored testing reported by Schmidt, Urry, and Gugel. (1978)

THE OPERATION OF A GUIDANCE SYSTEM

Envisaged here is a system which creates a file for each client. As data on self-awareness, needs, values, interests, and other variables is established with the

counsellor, it is entered into the file. Printout copies of the file can be examined at leisure, and weightings on variables can be changed with ease. If uncertainty exists, exploration via the appropriate tool can be conducted on a V.D.U. microprocessor unit. Findings can be discussed, weighted, and entered into the file. On completion of the file, information can be matched with job types in the job bank. The file can then be reassessed in the light of this material. This system takes account of subjective and objective material, minimises use of the main system, and enables guidance over a long or a short period. It is important to emphasise appropriation of space for constant revision opportunities, to allow both client and counsellor to obtain the maximum from the system. Investigation of the possible application of an interests guide to this system is carried out in Part Two of this thesis.

THE THIRD PROCESS: CAREER DEVELOPMENT

Having made a tentative job choice, it is then possible to search through the job file and find vacancies that do exist in that field, qualifications that are needed, advanced education that can be taken, and sources of further education. Here is where the third process of Vocational Development begins in earnest, the development of a career.

Already equipped with information on self-awareness, the working world, and decision making during schooling, this stage makes use of that knowledge to form a career plan and to prepare the person in the light of those factors presented by Super and Bohn and Levinson. For those without

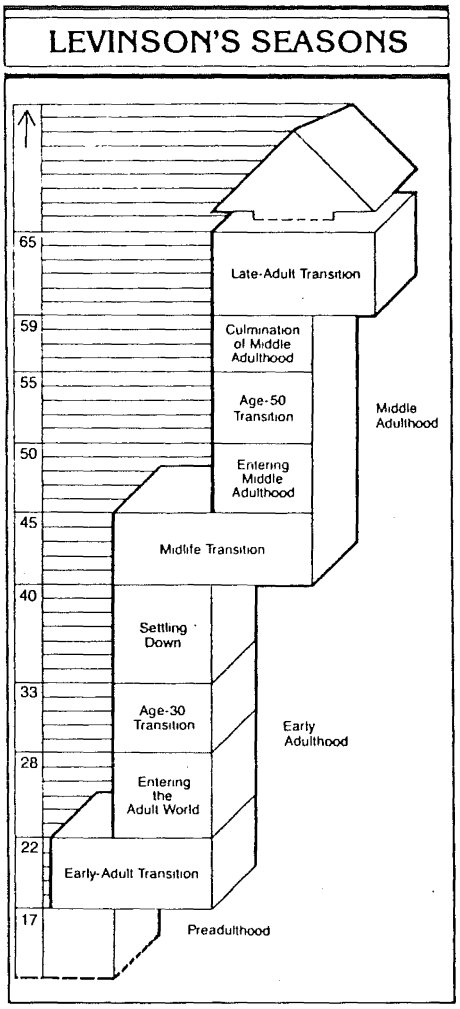
the knowledge, counselling can help to give the client a measure of awareness of the complexities of everyday life. Exercises aimed at such awareness are presented by Young (1975). Worthington (1977) reviews examples of career texts aimed at developmental processes. For satisfaction from such books, he claims, it is necessary to see the relationship between oneself and the world. Guidance at this point should aim for this understanding.

Access to information remains important throughout the planning stage. Simulation exercises may be used to further demonstrate decision making techniques. Newsom, et al (1973) write on the promise of computer based simulation. They claim that use of simulation may be the answer to the usual problems of training and placement in industry, and usage here may have the same advantages. It is necessary to demonstrate to a client what may happen, and why. If, for example, a woman is told that vocational development may occur significantly after child rearing is complete, as Fitzgerald and Crites (1980) suggest, that woman may be misled. It is far more satisfactory to demonstrate how personal development will occur throughout the child rearing process, that earlier skills may become dated, that abilities may weaken or strengthen, or new interests come to the fore. If a person is taught to be aware of such developments, then decisions will become easier to make. Not a "we'll fix you up then" programme, but to stress the importance of recognising change, decision points, and the factors behind them. When a woman returns to the working world, she then has an idea of herself, of the state of the working world, and her expectations and attitudes.

A second example is given by the student who decides to go on to tertiary education. This student should be aware that further decisions will have to be made over the following years concerning his vocation and his course options. He should also be aware that the initial job option that is presented may not be as attractive on graduation. Options may have improved, or the field may have narrowed considerably. Another course plan may allow him to move into an associated field if it becomes necessary. Assessment of options and predictions is important in this student's planning.

The career development process can be divided into stages, Levinson's (1978) diagrammatic representation of this is reproduced overleaf. Gould, too, develops the idea of stages of growth with distinct phases of growth and changes of personality and attitudes. Information on career planning should recognise this and make available a representation of the decisions and phases one is likely to confront. Hurlock (1980) provides information on job stability, for example, that more successful people are more stable, that change of job within an occupation is more frequent than between occupations. These changes are often the result of mature appraisal of talents and predispositions, based on experience. Hurlock (p 298) offers examples, in three cases showing workers refusing transfers to avoid the disruption of their families. Vaitenas (1978) also investigated career changers, citing change in both young and old as the result of incompatability of interests with the job, fear of failure, and emotional problems.

FIGURE 3


LEVINSON'S SEASONS
65
59
55
50
45
40
33
28
22
17
Late-Adult Transition
Culmination of Middle Adulthood
Age-50 Transition
Entering Middle Adulthood
Midlife Transition
Settling Down
Age-30 Transition
Entering the Adult World
Early-Adult Transition
Preadulthood
Middle Adulthood
Early Adulthood

Knowledge of such events and factors would give a person some basis for decision making during the career development stage. An essential attitude to foster is that guidance applies to, and is available to, anyone, whether young, old, unemployed, or working.

THE IMPORTANCE OF FEEDBACK

The above examples again bring to mind the importance of feedback, research, and evaluation services. If a school finds a system which has spectacular results, the analysis should be shared elsewhere. If a job centre obtains feedback on particular difficulties inherent in its system this should be acted upon. Feedback, research and prediction can prevent stagnation of the all-important data base.

Lewis and Gilhousen (1981) propose that rapid societal change contributes to the irrationality of static careers guidance. Such stagnation of the data base leads to confounding decisions, incorrect weighting on past experience, and even to searching for non-existant goals (p. 299). Thus, in a service which offers and uses information, the overall success of that service will be dependent on long term planning. Planning may weight various occupations in terms of being good or bad long term prospects, and can be used to forecast need for retraining and social planning, with the aid of economic and labour market predictions.

Further difficulties may arise in a system where pragmatic counsellors are asked to co-operate with theoreticians. The tools used by counsellors may be condemned

by the theoretician for the opportunities they present to mislead (Osipow 1973). Thompson (1976) has termed the persuasive value of interest inventories the misconception of exactitude. Being led to believe that a test is absolutely correct in prediction may result in later frustration. That inadequate information may lead to later conflicts means a close tie must be developed by research, between theory and practice.

Feedback may also be provided by public forums. Criticism, stimulation, and presentation of ideas must be recognised from any source by all services. Overleaf is one such example, from the Christchurch Press, 23rd March, 1981.

SUMMARY

Overall, this scheme must realise two objectives. First it must cater for the individual, and second, it must remain dynamic, always improving, refining, and avoiding stagnation.

Greater emphasis urged on training

Schools should concentrate less on academic studies and more on job skills training, according to the chairman of the Ashburton Enterprise Board (Mr D. G. Church).

In his report on the first six months of the boards work to the Business Development Committee, he said more people were needed in metal, wood, transport, farming, and farm servicing industries.

The number of unemployed women in Ashburton was steadily increasing, he said. They now represented 43 per cent of the total unemployed.

Most of the main industries in the town had now become the type that were male-dominated, and textiles, which were once a big employer of women were no longer the main employer in the district. equal pay was causing a gralual but increasing takeover by men of those jobs which once almost exclusively belonged to women.

Mr Church asked those responsible for education to take note of the changing structure of industry within the community. New industries were replacing the traditional forms of employment and it was necessary to train pupils for the industry opportunities now available.

Today, there was no division in schools between technical courses and academic courses, and it was not until the pupil had left school that he could develop trade aptitudes at a technical institute. But by this time it could be too late.

Mr Church said that if a pupil was fed an academic diet to which he was not suited, it would often result in behavioural problems and lack of confidence, which would later be seen as a poor work attitude.

He believed that an overemphasis on academic subjects, plus the closing of technical training facilities in Ashburton had been a main contributor to the present problems of the region.

Mr Church said that although local union branches tended to be responsible, and concerned to increase job opportunities, the good will of the local branches tended to be negated by the disruptive action of what he called "the maverick militancy" which arose in some parts of the country. Because of this, employers who did have the marketing and financial potential to expand and create more jobs were often afraid that if they did so an increased staff size would make them more vulnerable to union disruption.

The greatest challenge to the Enterprise Board lay in creating job opportunities which would fit in with the people who made up the unemployed of the town.

Mr Church said that fighting against the changes in the structure of industry was an upstream battle and eventually it would be necessary to go along with the structural changes — something which would require training and retraining.

He said that unless there was an immediate move in educational emphasis, the employment situation within the district could only get worse in spite of the creation of jobs. Job opportunities would be taken up, not by those from within the district who were in need of a job, but people brought in from outside, who had the necessary skills and qualifications.

The chairman of the Ashburton Business Development Committee (Mr D. S. McKenzie) said the report from Mr Church was the most significant document to be presented to the committee since the Otago University study prepared when the committee was established.

He said it was thought-provoking and stimulating, and presented a challenge to many sectors of the community.

He said that what stood out most to him in the report was tha the ultimate consequences of equal pay could be exactly the opposite from what was originally intended — because men were now tending to seek work in places that were traditionally the domain of women. But he said that could be countered if more women and girls were prepared to seek work in male-dominated fields.

PART TWO

INTRODUCTION

This section consists of two evaluations of the application of Vocational Interests to those ideas presented in Chapter Two. The evaluations concentrate on the decision making phase of the vocational development process. Chapter Three looks at perceived and measured Vocational Interests in a sample of older students of four secondary schools, and Chapter Four is an exploratory look at a deficiency in the research on computer administered testing.

THE CHOICE OF INTEREST INVENTORY

Measurement of Vocational Interests is carried out with the A.P.U. Occupational Interests Guide, hereafter referred to as the A.P.U. or the Guide. This instrument was chosen in order to facilitate the generalizability of results to local guidance. If the findings are to be applied to local guidance, it is important to use an instrument with which guidance services are familiar. Contact with Burnside High School, Ashburton College, and the Vocational Guidance Service in Christchurch suggested the A.P.U. would fit this category. The program developed to administer an interest inventory via computer (described in Appendix One), is designed around the A.P.U.

The Guide was developed over a period of years by S.J. Closs, the version used here being distributed in 1975. The Seventh Mental Measurements Yearbook, (Buros, 1972)

lists an earlier version, the criticisms of which seem to have now been accounted for.

Certainly, the new manual has few shortcomings in explanations of use, administration, or scoring. The manual is quite detailed with methods of construction, validity, and reliability covered in some detail. Campbell (in Buros) remarked on the construction, and the firm foundation it gives the Guide. The item selection was noted as appearing "to have been done uncommonly well." The Guide does not appear in the Eighth edition of the Yearbook.

CHAPTER THREE

INTRODUCTION

The assessment of the client's interests by a counsellor is an integral part of guidance. However, the client's perception of those interests may often be at odds with a realistically based appraisal (Slaney, 1980). The research in this chapter is an assessment of the discrepancy between perceived and measured vocational interests among a sample of secondary school students. The nature of the investigation also allows the collection of data on the effect of the act of completing an interests inventory upon the individual's perception of his interests.

Osipow presents the role of theory in the field of Vocational Psychology as an integration of disjointed research findings into a meaningfully organised body of knowledge (1973, p 5). The first section of this chapter will place this research within the framework of the use of interests in guidance.

INTERESTS AS A PART OF VOCATIONAL KNOWLEDGE

Defining interests means placing the concept within the individual's vocational and self knowledge. They are, in fact, part of a multiple relationship which Thompson (1973) describes as intricate and largely inexplicable. Thompson cites abilities, aptitudes, aspirations, and interests as factors of relationship. One does not necessarily lead to another, but a strong feeling in one may motivate feelings along similar lines in others.

Strong (1943)[1] categorises interests as learned aspects of behaviour, and presents them as being part of an amalgam, rather than separate entities. Ferguson (1960), supports this duality concept, defining aptitude as a joint function of ability and interests. Interests and aptitudes may be important as behavioural correlates. Jenkins (1962) produces data outlining aggression, anti-social behaviour, and delinquency, as possible results of a significant discrepancy between the two.

This multiplicity of factors is also observable in some of the determinants of interests. Schneider, et al, (1980), review and research the parental effects on personality development of a child. It appears that parental personality may influence that of the child, more so if that child is female. Physiological development may also affect the development of interests. Singer (1978) found that sufferers of visual refraction error (myopia) score lower on the Infrequent Response scale of the Holland Vocational Interests Inventory. A similar effect is found when the Strong-Campbell is used as the measurement inventory.

Interests, then, are developed as part of a person's maturation process, the determinants of, and the effects of, the result tied with other facets of the person.

SEARCHING FOR A DEFINITION

Recent texts, concentrating on career development, tend to ignore interests as an area for discussion, and do not present any definition even when devoting length to the concept. Peitrofesa and Splete (1975), list interests twice,

1 Jenkins, E.R. 1962

and neither refer to substantive investigation. More surprisingly, Campbell, in the 1973 SVIB Manual, does not define the subject on which the manual is based.

Closs (1975), presents a comprehensive definition of Vocational Interests. The terms Interests and Vocational Interests are seen as being interchangable as Vocational Interests are the results of Interests in general being applied to Occupational material, thus, there is no real difference. Closs's definition, however, presents a view of what the interest inventory is supposedly measuring, so the wording is slanted to the vocational aspect.

> "Interest is the subjective experience of pleasure or satisfaction derived from and intrinsic to certain types of activities to which an individual finds he can give a full yet comparatively effortless concentration of his attention. The particular activities giving rise to it are thought to be those in which the individual's capacity to appreciate, understand, and control the environmental factors involved are more or less matched by the demands of the activity.
>
> Interests may be regarded as traits, belonging with attitudes and needs, to the general area of motivation, but distinguished from the former in that attitudes involve beliefs as well as feelings and pertain to objects and actions of a purely social nature, and from the latter in that needs are related to physiological, psychological, or social states rather than to activities. They also differ from motives of a more immediate nature in being of relatively long duration at relatively stable strength."

This definition gives rise to seven main attributes of interests:

1. they are subjective
2. they involve a pleasant feeling
3. they are intrinsic to the activities where experienced
4. participation in these activities involves concentration of attention
5. this concentration is comparatively effortless
6. these activities occur where the individual's capacities are matched by the activities' demands
7. on maturation of these interests, they become relatively stable.

THE USE OF THE INTEREST INVENTORY

Campbell (1973) gives a brief outline of the development of the interest inventory. One of the earliest attempts to deal specifically with interests is presented in an article by Thorndike (1913), in the Popular Science Monthly. Entitled, "The Permanence of Interests and Their Relation to Abilities", the article concluded:

> "Either because one likes what he can do well, or because one gives zeal and effort to what he likes... interest and ability are bound very closely together.. either may be used as a symptom for the other as well as for itself." Campbell p 345

The inventory method has its foundations at the Carnegie Institute of Technology at Pittsburgh shortly after W.W.I.

Work included the measuring of mechanical and social interests of engineers (1921), and all groups (1924), as well as distinguishing between successful and unsuccessful salesmen by their interests (1924). Miner (1922) researched the use of the inventory enabling interests to be measured. Strong and Paterson increased the scope and standardisation of the inventory, and developed scoring keys.

The inventory has its purpose in increasing the self awareness of clients (Closs). Who, however, is it necessary to administer the inventory to? Zytowski (1973), argues that the use of inventories is limited to those who have a choice of occupation, or who wish to plan for a career. O'Neil (1980) suggests that administration be dependent on individual differences and the differential patterns of career choice and development. O'Neil, Closs, and Ginzberg (1971) all restrict use on the need for self awareness, whereas Zytowski argues on social grounds. The interest inventory is seen as a tool to aid comprehension of interests.

The call to recognise and research this issue has been frequently voiced by Holland.[1] Obviously all clients do not have the same counselling needs, and this difference is often accentuated by cultural differences in multiracial societies (Harrington and O'Shea 1980). Care must therefore be taken when using these instruments, to do so with clients informed of their proper use, and to do so within the limits of their design. Slaney (1980) is one of the few researchers to present a basis for classifying clients, with the use of an Occupational Alternatives Questionnaire, those expressing a first choice, being routed around interest measurement.

1 From Slaney, 1980

Whether such a method is effective is, as yet, unproven. So too, however, is the questioning procedure of the counsellor. It is possible that a strongly expressed interest area is the result of inadequate information, whereas the operation of the inventory demands presentation of several different jobs connected with any one area.

How large a discrepancy between perceived and measured interests exists amongst those persons of an age to begin looking for a career? If these perceived interests are based on inadequate information, the use of an interests inventory may, in itself, alter the perception of those interests.

The following investigation was designed primarily to provide counsellors with some data on the degree of difference between perceived and measured interests among school leaving age students. The design also allows collection of data of the effect of completing an inventory, without feedback of results, on the perception of interests.

METHODOLOGY

The questionnaire used in the survey of secondary school students was presented in two parts. The first contained the written instructions and the question format. This consisted of the names and descriptions of the eight A.P.U. categories as used by Closs. The categories were labelled alphabetically A-H. Also in the question form was a male or female standard form A.P.U. Booklet. The standard form was used as the sample contained fifth formers, and the advanced form is intended for an older age group.

The second form comprised of six sections, each of which was a score sheet. Sections One and Two required the ranking and scaling of the eight A.P.U. categories in order of preference. The purpose of the ranking was to give the subject a chance to order the categories, to aid the scaling. The scaling was completed on an un-numbered line on which was a 'Like' end and a 'Dislike' end. The ends were not labelled, instead, in the centre of the line were arrows, one labelled 'like more', the other, 'like less'. This was done to avoid placing the categories next to a numbered or labelled point, merely implying where the extremes were likely to be. The scaling was included to provide a subjective measure of interest in the categories, which could be compared with an A.P.U. summary score.

Section Three of the second form was an A.P.U. score sheet. Sections Four and Five were another set of ranking and scaling figures, and section Six contained biographical data collection questions. Section Six included sex, age, whether the subject had received any vocational counselling, the subjects choice of future occupation, and whether return to school was due to not being able to find employment.

Administration was standard over all the schools involved. The requested classes were gathered together in a hall or large room, and each student was handed the forms. Then, step by step, the questionnaire was explained, with the use of large scale drawings on the ranking, scaling, and A.P.U. answer forms. The multiple gathering was to lessen disruption to the school timetable, and occured either after assembly or during a form period. In order to gain approval to approach students, minimal disruption had to be assured,

and to this end the students were required to complete the forms out of school hours.

Realising that this would result in a small return, schools were requested to supply at least twice as many students as were envisaged for statistical analysis. This proved to only just be adequate. The forms were collected from the schools over the following week, and many thanks are due to the staff members to co-operated in this collection.

SAMPLE 1: SAMPLING UNEMPLOYED: IMPOSSIBLE?

Originally, the study was to have included an equal number of unemployed and employed students, matched for age. The school score sheets contained on the first page a space for studentsto list the names and phone numbers of persons who were in their class and who were now unemployed. The students were instructed not to enter these names unless they had checked with the person concerned beforehand. The idea here, was to begin a snowball sample technique from the initial names. Three quarters of those names which did get offered were those of school pupils on whom a joke was being played. Of those who were unemployed, at least half were no longer willing to complete the form, a quarter had never been approached by the student, and, in all, a mere thirty were gleaned from the four schools. Those from Ashburton were given a choice of being visited, being given a stamped addressed envelope to return the form in, or attending one of two sessions at a local primary school. Although most opted for the latter, only two people actually attended. Two questionnaires were returned through the mail.

In Christchurch, the choice was enlarged. Persons could be sent or delivered the forms, could collect the forms from two sites, or could attend sessions during the day in the city, or in the evening at Unviersity. Of all who said they wished to complete the form, only six complied, most of these by attending in the city. There were no further names forthcoming for the snowball effect.

It was then decided to advertise in the local newspapers on Friday and Saturday evenings, and Saturday and Monday mornings, in the 'personal' and 'situations vacant' columns. A small cash remuneration ($2) was offered to those who completed the form, in order to cover expenses in bus fares etc. Although some thirty persons indicated a wish to comply, only seven actually arrived at a session or returned a form. No further names were gleaned for a snowball sample from this source either.

In view of time restrictions, it was then decided only to pursue the student population in this study. Initially, six schools replied to a letter of introduction, and agreed to take part in the survey. Unfortunately, Mairehau High School was unable to supply a date on which the required fifth, sixth and seventh formers could be gathered together at one time, which was mutually agreeable, and did not wish the disruption of two separate visits. St Thomas's of Canterbury College was also eliminated through the small return (11) of score sheets from the students.

The schools, Ashburton College, Villa Maria College, Burnside High School and Riccarton High School, each supplied two classes of fifth and sixth formers, and the seventh form.

The fifth and sixth forms, if classes were streamed, were requested to be of average ability composition, that is, as representative as possible of an unstreamed class.

In all, twenty pupils from each form from each school were desired. This quota was filled, though attrition was well over half in some classes. The co-ed schools provided a reasonable proportion of male to female ratio. A breakdown of the population is presented in Appendix Three.

ANALYSIS

The data collected were first re-coded into a form able to be handled by multivariate techniques. The A.P.U. sheets were scored and then the preference and L-D scores were combined in the algorithm presented by Closs (1975, p 152) into Summary Scores. (For the A.P.U. user, this summary algorithm approximates the diagram on the front of the A.P.U. Score Sheet). In fact, this algorithm produces scores with values between 10 and 90, so a scoring overlay was devised which divided the scaling line equally between these values. The transparent overlay allowed scoring a value to the placement of a letter. The scale was devised to give a subjective rating of interests, and the A.P.U. was given to obtain a measured rating.

The raw data, therefore, takes the form of three sets of scalings of eight categories for each subject. To process this data a degree of relationship between subjective and measured interests was obtained by calculating Pearson's correlation coefficient between the subjective scalings and the A.P.U. summary score. This relationship or similarity

was used because the object of the subsequent analysis was to determine whether or not there exists a factor or combination of factors which enable a counsellor to predict that relationship. Although the correlation removes "within-subject" variance, the "between-subject" variance is not affected, as the correlations are calculated separately for each subject. (The calculation of correlations was done using the COMPUTE command in S.P.S.S.)

Two types of analysis were used on the data. Multiple regression analysis allows the construction of a prediction equation (Kim and Kahout, 1975). Regression gives a weighting to each independent variable, given as the B score (not Beta), and a constant, the combination of which will give a prediction equation.

Thus, if three independent variables are used in regression on our dependent factor (say, age, income and education) and the following B and constant values are obtained:——

		B
	Age	.1296
	Inc	.0089
	Ed.	.0018
Constant	A	2.9889

the prediction equation using these three variables would be

$$Y' = 2.9889 + .1296\ (\text{Age Score}) + .0089(\text{Inc Score}) + .0018(\text{Ed Score})$$

The overall accuracy of this prediction equation is reflected by R^2, the proportion of variance explained by the variables included in the Regression equation. Accuracy in

absolute units is found using the standard error of estimate for the regression equation. If the example above had an R^2 = 2.822 and a standard error of .8604, then we know that 28.2 per cent of the variance in the dependent variable is explained by the variables included in the regression equation, and that predicted dependent variable scores will deviate, with a 68.2% chance, from actual scores by .8604 units on the dependent variable scale.

However, as the independent variables are often expressed in differing units, it is difficult to determine their relative importance on the basis of the univariate B value. Use of the Partial B allows observation of the effect of one standard deviation change in the independent variable on the dependent variable.

Whereas Multiple Regression is a linear technique, allowing determination of a factor, or combination of factors, to predict the degree of each persons' awareness, the second technique used, Multiple Discriminant Function Analysis, allows for the maximum separation of groups. In order to use the Discriminant procedure, the correlations have to be grouped. This procedure, of course, lessens the "between-subject" variance, with the result that the sensitivity of the analysis to the data is somewhat lessened.

The two methods are used to complement each other. The Multiple Regression constructs a best fit line through the data, giving a prediction equation which has taken into account the full sensitivity of the data gathered. The Discriminant Analysis allows prediction of high, low or medium relationships. Thus, from the data, one may establish an equation which will give a value for each new subject on

an equal interval scale, or allow the placing of that subject into a group representing a low, medium, or high relationship between subjective and measured interests. The former has the advantage of giving a reflection of the true accuracy of a prediction based on the gathered data, while the latter, which will indubitably have a higher predictive accuracy, is an artifact geared to meet a practising counsellors' needs.

For the Discriminant Analysis, the correlations were divided into five groups, values between 0 and 0.2 being group one, 0.2 and 0.4 group two, and so on. These groups were very unequal with respect to the number of cases contained, so the first, second and third groups were recoded into a single group.

Discriminant Analysis is used here as a classification technique (Klecka, 1975). A set of independent variables is found which provides satisfactory discrimination for cases with known group memberships. Thus, a set of classification functions can be derived which will permit the classification of new cases with unknown membership. As many different discriminating variables have been used here, a stepwise procedure available with S.P.S.S. was used. This procedure begins by selecting the variable which most improves that discrimination, and so on. At each step, variables already chosen may be removed if they reduce the discrimination when combined with more recently selected variables.

In order to predict the probability that the self awareness of interests of a non-sample student belongs to a certain group, we can use the characteristics that have been successful in predicting the classification of a sample of students. A check on the adequacy of the discriminant functions is carried out by observing what percentage of

the original set of data they can correctly classify. These produce a probability of membership to each group, and the case is assigned to the group with the highest probability.

Multivariate analysis was used for this data as univariate statistics would be misleading (see Leary 1980). However, in the analysis of the effect of the completion of the A.P.U. on the subject's perceived interests, univariate statistics were used, in the form of a T-Test. The method used was one of paried samples. Three sets of paired data were tested in this way. If the correlation between the first scaling and the A.P.U. summary scores are regarded, for the individual, as a pre treatment score, the correlation between the second scaling and the summary scores can be regarded as a post treatment score. An objection may be raised that a correlated T-Test is being performed on correlations, and the results would be nonsensical. It is essential to regard the correlations as two indicants of similarity between scores, and it is this similarity that is being investigated.

Secondly, all pairs of raw data, (i.e. each subject's first scaling of Natural, with his second scaling of Natural, the first scaling of Artistic with the second scaling of Artistic, and so on), were tested to see if, across all pairs, a significant change was present. Thirdly, each category was tested across all subjects to see how the second testing result was constituted.

RESULTS

Multiple Regression

Presented below are the values for the independent

variables gained by multiple regression with the dependent variable being the correlation between scaling 1 and the A.P.U. score. Included are the values of R^2 and the Standard Error of the Estimate, as well as the multiple regression summary table.

Table M 1	MULTIPLE R	0.21328
	R SQUARE	0.04549
	ADJUSTED R SQUARE	0.00714
	STANDARD ERROR	0.21266

Variables Used in the Analysis

Table M 2

HRS = Hours of counselling attended
SEX = Sex of subject
AGE = Age in years of subject
FRM = Form attended at school
REL = Religious denomination
CON = Whether have ever had counselling
YRS = No. of years at secondary school
RET = If returned to school when couldn't find a job
CAT = Which school attended

Table D 1 and D 2

Functions 1 and 2 are described in table D2

Table D 3

Groups 3, 4, 5 are groupings of the correlations between the first scaling of the A.P.U. measure.
Group 3, Correlations between 0 and .6
Group 4, Correlations between .6 and .8
Group 5, Correlations between .8 and 1.0
*See page 45 for further description

Table T 1

T8 is the correlation between the first scaling and the A.P.U. Measure for each subject.
Z6 is the correlation between the second scaling and the A.P.U. measure for each subject.

Table T 2

Pre is each part of all subjects first scaling.
Post is each part of all students second scaling

Table M 2

VARIABLE	R SQUARE	RSQ CHANGE	SIMPLE R	PARTIAL B
HRS	0.00081	0.00081	-0.02853	0.1058878E-02
SEX	0.00095	0.00013	-0.01156	0.1090806E-01
AGE	0.01980	0.01886	0.13454	0.2076058E-01
FRM	0.02474	0.00493	0.15163	0.4416883E-01
REL	0.02859	0.00385	-0.06514	-0.1265798E-01
CON	0.02877	0.00018	-0.00342	0.3785573E-02
YRS	0.03210	0.00334	0.10893	-0.2084487E-01
RET	0.03586	0.00376	0.04412	0.5350479E-01
CAT	0.04549	0.00962	-0.07884	-0.1190145E-01

Discriminant Analysis

The following tables present the Canonical Discriminant Functions (1), the standardized coefficients of these (2), and the classification results (3) on the basis of function 1.

Table D 1

FUNCTION	EIGENVALUE	PERCENT OF VARIANCE	CUMULATIVE PERCENT	CANONICAL CORRELATION
1*	0.02858	59.98	59.98	0.1666861
2*	0.01906	40.02	100.00	0.1367774

AFTER FUNCTION	WILKS'LAMBDA	CHI-SQUARED	D.F.	SIGNIFICANCE
0	0.9540275	10.683	6	0.0987
1	0.9812820	4.2870	2	0.1172

Table D 2

STANDARDIZED CANONICAL DISCRIMINANT FUNCTION COEFFICIENTS

	FUNC 1	FUNC 2
CAT	-0.44716	-0.61312
AGE	0.75006	0.19787
RET	0.72508	-0.68576

Table D 3

CLASSIFICATION RESULTS -

ACTUAL GROUP	NO. OF CASES	PREDICTED GROUP MEMBERSHIP 3	4	5
GROUP 3	58	17 29.3%	21 36.2%	20 34.5%
GROUP 4	102	21 20.6%	40 39.2%	41 40.2%
GROUP 5	75	11 14.7%	23 30.7%	41 54.7%
UNGROUPED CASES	3	1 33.3%	2 66.7%	0 0.0%

PERCENT OF "GROUPED" CASES CORRECTLY CLASSIFIED: 41.70%

T. Test Results

Table T 1 is the matched pairs T-Test for the pre and post correlations. Table T 2 is the T-Test for all pairs of data, and T 3 the results of T-Test by category.

Table T 1

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	(DIFFERENCE) MEAN
T8					
		0.6827	0.223	0.014	
	240				-0.0302
		0.7128	0.232	0.015	
Z6					

STANDARD DEVIATION	STANDARD ERROR	*CORR.	2-TAIL PROB.	T VALUE	DEGREES OF FREEDOM	2-TAIL PROB.
0.159	0.010	*0.757	0.000	-2.94	239	0.004

Table T 2

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	*	(DIFFERENCE) MEAN
PRE					*	
		54.2281	24.983	0.570	*	
	1920				*	-0.8391
		55.0672	25.344	0.578	*	
POST						

STANDARD DEVIATION	STANDARD ERROR	*	CORR.	2-TAIL PROB.	*	T VALUE	DEGREES OF FREEDOM	2-TAIL PROB.
13.535	0.309	*	0.855	0.000	*	-2.72	1919	0.007

Table T 3 is presented overleaf

Description of variables in Table T 3

The variables Scientific, Social Service, ..., Natural, are those categories used by the A.P.U. Interests guide. Factors 1 and 3 for each category represent all subjects scaling scores for that category. 1 for the first scaling, 3 for the second scaling.

TABLE T 3

VARIABLE	NUMBER OF CASES	MEAN	STANDARD DEVIATION	STANDARD ERROR	(DIFFERENCE) MEAN	STANDARD DEVIATION	STANDARD ERROR	2-TAIL CORR.	2-TAIL PROB	T VALUE	DEGREES OF FREEDOM	2-TAIL PROB
1		55.6458	27.022	1.744								
Scientific	240				-1.9958	14.983	0.976	0.848	0.000	-2.06	239	0.040
3		57.6417	27.260	1.760								
1		55.9208	25.933	1.674								
Social Service	240				-0.8583	13.783	0.890	0.861	0.000	-0.96	239	0.336
3		56.7792	26.369	1.702								
1		57.2333	22.159	1.430								
General Service	240				-1.1083	14.357	0.927	0.801	0.000	-1.20	239	0.233
3		58.3417	23.253	1.501								
1		44.7208	23.971	1.547								
Literary	240				-1.0750	12.605	0.814	0.861	0.000	-1.32	239	0.188
3		45.7958	23.803	1.536								
1		51.5958	23.372	1.509								
Artistic	240				-1.1917	13.172	0.850	0.844	0.000	-1.40	239	0.162
3		52.7875	23.796	1.536								
1		46.1708	27.245	1.759								
Computat-ional	240				0.2083	11.455	0.739	0.913	0.000	0.28	239	0.778
3		45.9625	27.584	1.781								
1		56.3042	22.474	1.451								
Practical	240				-0.2042	13.522	0.873	0.818	0.000	-0.23	239	0.815
3		56.5083	22.403	1.446								
1		66.2333	20.577	1.328								
Natural	240				-0.4875	14.167	0.914	0.770	0.000	-0.53	239	0.594
3		66.7208	21.186	1.368								

DISCUSSION OF RESULTS

It should be noted that although data were gathered on the occupations of the subject's parents, these are not included in the analysis. Use of these data resulted in losing one third of the sample through missing values. Analysis was carried out with this reduced sample, and as the categories did not aid prediction or discrimination, they were dropped in favour of a larger sample.

The first value reported in the Regression Analysis summary is that of R^2. This value explains the proportion of variance accounted for by the independent variables: thus $1-R^2$ gives the variance unaccounted for. The biographical data gathered account for only 4.5% of variance, that is, some 95% of variance remains unaccounted for. These factors, or combination of factors, therefore, do not seem to be of much assistance in determining self-awareness of interests.

We can learn from observation of the individual factor results, however. The Partial B values can be used as measures of the influence of each independent variable upon the correlation, with adjustments made for the other independent variables. We find that those variables with the most influence are RET (whether returned to school because unemployed or not), FRM (which Form in at school), and AGE (in years). These scores may be used as an indicator of which variables to pursue in future research.

The lack of influence of those variables indicates that there would be little point in attempting to construct a prediction equation from the B values.

Use of the Wilks stepwise inclusion method to sort out independent variables with some discriminating power resulted in only three of the nine variables passing the criterion for selection. The eigenvalues and their associated canonical correlations denote the relative ability of each function to separate the groups. Relatively, they are both useful, so we look to Wilks Lambda to see how useful they are when references to the sample Ø. Wilks Lambda shows us that in all the independent variables, little discriminating power exists, and of that that does exist, Function 1 contains a fair proportion of it (see 1 Wilks Lambda).

Looking to the classification of cases, (D.3), we find confirmation of the above reasoning. The most powerful function that can be derived from the variables given can only correctly classify 41.7% of the cases. Again, although the analysis has pointed to variables which are stronger in discriminating than others, there is no significant discrimination. Interestingly, the third variable, following on from AGE and RET, is CAT (the school the subject comes from). This, however, may be an artifact of the sampling.

Comparing the two sets of results, we see that although the predictive accuracy of the discriminant analysis is much higher than that of the multiple regression, those values gained from the regression suggest the difference is mainly an artifact of the groupings. Thus, use of the multiple regression can prevent, in a case where the predictive accuracy is acceptably high in the discriminant analysis, making false assumptions about the data.

T. Tests

Tables T 1 and T 2 show the effects that administration of the A.P.U. have had upon the perception of interests. T 1 is a T-Test on the change in the correlation from the

perceived scale to the measured scale. Apparently the higher correlation of the post experimental scaling with the A.P.U. scores (represented by Z6 on the Table) is significantly different from the pre scores correlation (T 8), not to be attributable to error variance in the data. The significance level, ($p<.004$) in traditional statistics, allows us to support an hypothesis that completing the A.P.U. without feedback has an effect on the correlation of scalings with A.P.U. summary scores.

Observation of Table T 2 shows that when the administration of an A.P.U. is analysed for effect across all scores in the first and second scalings, the result obtained is also significant ($P<.007$). Traditionally, we could reject a null hypothesis that completing the A.P.U. has no effect on the scaling of the eight A.P.U. categories.

Table T 3 explores this effect across categories in scaling one and scaling two. We find here that the effect of the completion of the A.P.U., while significant overall to the sample, is not significant within the categories to any real degree of acceptance. The Computational and Practical categories change very little between the scalings, where comparatively, the Scientific category changes quite markedly.

Again, this may be an artifact of the sample, or alternatively it could be an indicant for interpreting the use of the A.P.U. within the Canterbury region. Further research is needed to clarify this point.

CONCLUSIONS

This research is to be regarded as purely exploratory. No strong hypotheses were cast and therefore much of the post hoc reasoning given should be regarded as no more than tentative suggestions of directions for future research. The investigation was concerned with the effects of perceived

vocational interests of secondary school students, and the providing of counsellors with data on those perceptions. The way chosen to do this was to investigate the possibility of prediction of the degree of correlation between perceived and measured interests by biographical data. While this researcher believes that the correlations reported are an indicant of the degree of self awareness of interests, others may not. Beyond this, it seems as if looking solely at standard biographical data is not enough for prediction. While acknowledging the danger of post-hoc reasoning, it seems as though those variables connected with age, length of stay at school, and willingness to be at school are the type of variables further research should pursue. Working with these data has strengthened a belief that a measure of completeness of the student's information base should be devised as a predictor of self-awareness of interests.

(Further to this, a breakdown of the degree of self awareness by school, form and sex is printed in Appendix Three).

Despite the significance of results, one is wary of drawing conclusions about the effect of completion of the A.P.U. without feedback, except to say that there is a measurable effect. The wariness stems from the Table T 3, the T-Test on the categories. This shows how little is realised by the overall T-Tests (Tables T 1 and T 2), on this sample. The question of sampling arises here, and a pointer to further research is that the sample should be as well defined as possible. The sample used in this research was not as spread across all students as may be desirable, and the persons who did not return the forms may have

constituted one particular group.

Any further research in this area would be very time consuming, involving individual administration of the A.P.U. across all students sampled to ensure accuracy. In the interest of ensuring privacy to the subject, the forms used in this research did not ask for some data. Subsequent forms should do so, thus ensuring the sample is evenly spread. Examples of such data would be class at school, race, job experience, and so on.

Subsequent studies should also attempt to investigate employed and unemployed persons of the same age group. To gain a large sample, however, substantial funding may be required.

In all, further research into this area can only aid the counsellor and, therefore, the counsellee. Ample areas of study are still available, and not least of these is a way of discerning the self awareness of the individual.

CHAPTER FOUR

INTRODUCTION

The research in this chapter was prompted by what appears to be a gap in the literature concerning the presentation of tests via Visual Display Units (V.D.U.s). This area does not include computer scoring or analysis of tests administered via other media.

For present purposes, a V.D.U. is of the cathode ray type, although chemical and electroluminescent screens are available. Input is administered through a keyboard, although systems using a light pen for response are available.

The research in this area tends to be ergonomically, rather than psychometrically, orieted. Thus, various sources discuss screen size, readability, resolution, reflection, brightness, contrast, colour, refresh rate, message size, information type, fatigue, angle of screen, response speed, and some physiological effects.[1] All these factors should be kept in mind when programming for the inexperienced user. When establishing a permanent system, one may specify the equipment used, whereas, in research, it is often a case of adapting what is available.

EQUIPMENT EFFECTS

There are several equipment-dependent effects which may prove distracting to the user. Foremost amongst these are the readability of the screen, the angle and distance from the user, fatigue, and physiological problems,

1 From Shear, 1979

including eyestrain, epilepsy, and migraine. Research in these areas is minimal, and reference is best sought in the engineering or human factors sections of library or source material.

Wilkins, (1978), shows that epileptics are least reactive to small, low luminence, black and white screens, of the type found commonly at computer terminals. Microprocessor manufacturers, however, encourage the use of colour screens, and it is necessary to ensure alphanumerics are printed as white on black, thus reducing the area of the retina stimulated. Parameters of spatial and temporal frequency can be stabilized by reducing, if not halting, the scrolling rate. Wilkins encourages reduction of the mean luminence of the screen, as it is "necessary to effectively reduce the likelihood of paraoxymal activity." On most screens this means adjusting the brightness, and no adjustment of contrast will occur.

PSYCHOMETRIC EFFECTS

Little research has covered the effects of V.D.U. administration on Psychometric devices. Reardon and Kahnweiler (1980) examined pencil-and-paper and tactile board administrations of S.D.S., and the choice of their use amongst subjects. Results indicate sex and academic achievement differences in preference of form. Such preference may be a factor in overall performance as well, although the research did not enter the field.

A change of format of presentation may also affect the impression of the test gained by the subject. For

example, the program used in this research presents single pairs of interests, and the scoring of that pair, on the screen at one time. The standard presentation involves a multi-answer score sheet, and a booklet of activity pairs. While the program gives little cue to the length of the test, the score sheet gives direct comparison of the amount completed with that remaining.

A reason for the lack of research on the effects of V.D.U. administration on the psychometric properties of a test may be that many tests are developed for that particular program. This is the case with the SIGI system of Katz (1973), and of Schmidt, (1978), Newsom (1978), Haase (1979), and Price, Michal, and O'Neil (1978). However, complacency through having developed one's own psychometric device specifically for a program is unwarranted. In fact, these devices are most often developed, validated, and researched from information collected with pencil-and-paper forms.

Such data collection is, admittedly, less expensive, less time consuming, and more convenient for scattered sample populations, but hardly reassuring. Some research concerned the effects of computerized and ordinary feedback. (Bringmann and Christian 1979, and Millar and Cochran 1979). This area should be regarded with some trepidation, as machine presentation of results may add to Thompson's misconception of exactitude. The one study found that directly focused on the psychometric properties of the test was that of Cory (1977). This research presents predictive validity for both experimental pencil-and-paper and the V.D.U. administered operational tests. Cory concludes that the validity is not negatively altered by computer

administration.

EXPLORATORY RESEARCH ON RELIABILITY

The following investigation compares the overall effect of V.D.U. presentation, against that of pencil-and-paper administration, on Reliability. That is, if score fluctuation occurs as a result of factors irrelevant to the test.

There are four main ways of determining the reliability of a test. Test-retest requires two sessions for each person, and is subject to variance in external factors acting on a person. Too many factors can be left unaccounted for, for this to be a sensitive instrument with an ipsative inventory. Alternate form reliability is excluded here through the practical difficulty of constructing a comparible form from a different base population in a short time.

Kuder-Richardson reliability is based on the formula developed in 1937 (Anastasi pl16). The commonly used formula 20 cannot be applied to inventories, and the generalised coefficient alpha given in formula 1 cannot be used with ipsatively scored tests, as the denominator becomes zero.

FORMULA 1 $$r = \frac{k}{k-1}\left(1 - \frac{n\Sigma Q^2 - \Sigma T^2}{n\Sigma x^2 - (\Sigma x)^2}\right)$$

Ebel,pp327-330

Use of this would preclude investigation of the preference scores of the A.P.U.

The design constructed uses Split-Half reliability to measure effects on the content sampling or internal

consistancy of the Guide.

METHODOLOGY

The problem of splitting the Guide to obtain equivalent halves is eased by the construction used by Closs (1975). The A.P.U. is designed in two technically identical halves. That is, the positions of two combinations of activities, e.g. NA with LI, or SC with AR; in the first fifty six pairs of the Guide is identical with that combination's position in the second fifty six pairs. The similarity is technical only, as one cannot judge the exact similarity of the items themselves over all individuals. This is an individual constant over one sitting, as are fatigue effects.

Both conditions were concluded in the same manner. All subjects were familiarised with the equipment before beginning. No subject had encountered the A.P.U. before, and the nature of the Guide, and the construction behind the scoring mechanism were carefully explained. (This method proved very effective as instruction for completing the Guide). No subject was informed beforehand of the existence of the other condition.

SUBJECTS

A total of forty subjects were used. Although several subjects were used to establish the techniques of administration, these were not included in the final analysis. Subjects were matched as closely as possible for age and V.D.U. experience. All were male, between 19

and 27 years, and of high educational achievement. (All had attended University). Experience with the V.D.U. was established by questioning the subject. (This applied only to V.D.U. experience as an operator for a length of time. Screen games were not counted as V.D.U. experience). Both groups contained six subjects who satisfied this definition. Degree of experience was regarded as secondary to age matching due to age effects on interest stability.

EQUIPMENT

The pencil-and-paper administration took place with the standard A.P.U. booklet and answer sheets. The V.D.U. administration used the program described in Appendix One, altered to score the two halves. A TRS-80 processor unit (32K-RAM) with Level II basic inrom and a 12 inch cathode ray black and white screen was used.

ANALYSIS

Splitting a test means effectively halving the length of the test when determining reliability. The Spearman-Brown formula (2) was used to correct for the half length.

FORMULA 2 $$r_{1I} = \frac{2r'_{1I}}{1 + r'_{1I}}$$ Anastasi(1976)p116

Rulon (1939) has devised a measure which does not require this lengthening process, however, results for split-half are commonly reported in terms of Spearman-Brown figures, and Closs (1975) used them, so the need for the alternate

form was not found.

RESULTS

The results below are the r_{1I} for Computer (C/C) and Pencil-and-Paper (P/P) administrations. Table 1 gives both the Spearman-Brown coefficients and the Pearsons r from which these were derived. Table 2 presents the figures which Closs obtained for Males from his standarisation sample of N = 2290. It should be noted that Closs's reliabilities are for the Preference scores of each category, rather than for the overall reliability as this research presents. Closs does not present the reliability of the summary scores, but as this score represents an amalgam of both Preference and Like minus Dislike scores it was felt the summary scores would reflect the overall reliability which is that sought by users.

Split-half testing requires the Spearman-Brown correction of the correlation (here Pearsons) obtained. This is a correction for the attenuation of n that comes about as a consequence of halving the length of the test.

Table 1 contains the Pearsons Coefficients and the Spearman-Brown corrections of those coefficients.

TABLE ONE

CONDITION		PEARSONS	SPEARMAN-BROWN
Computer Administered	SUMMARY SCORES	.8955	.9449
Pencil & Paper		.8628	.9264
Computer Administered	PREF SCORES	.7968	.887
Pencil & Paper		.8112	.896

TABLE TWO

SC	SS	GS	LI	AR	CO	PR	NA
.832	.804	.783	.822	.810	.879	.852	.837

DISCUSSION OF RESULTS

With several qualifications, it can be said that this exploratory work has not discovered any alteration in reliability of the A.P.U. when administered via V.D.U.

However, those qualifications may mean that this result is not even remotely generizable. The major factor to take into account is the sample used. This sample was very small, less, in fact, than one hundredth of the sample Closs used, and thus is far less representative of individual variation. Also, all those used in this work were of above average education. This means that not only was the sample biased, it was also using a standard form instead of the advanced form designed for that sample. The reliabilities given for Closs's advanced form are higher than those of the standard form, which may be a reflection of subject, rather than construction effects.

Furthermore, most of the sample were over the age of 20, an age where interests are seen as having become reasonably stable. These subjects had also more likely been exposed to more jobs than Closs's sample, due to education and age.

What, then, can be taken from this work. Firstly, there is no apparent difference here, although if there was, it would be treated to the same qualifications as above.

Secondly, there is the matter of subject response to the two forms. Altogether, fifty subjects were given both forms of administration. All agreed that, after explanation, the V.D.U. version was easier and less boring to complete. All also agreed that the V.D.U. version appeared to be quicker to complete. Some were, in fact, slower on the V.D.U., but an informal time measurement showed the majority to be up to fifteen minutes faster. All subjects agreed that the screen format was preferable to that of the pencil and paper version, in terms of ease of answering and reading questions. The line which enabled the changing of answers was also praised, some subjects mentioning that they had made many minor changes they would not have bothered with on the pencil and paper form.

Again, however, one must be careful in drawing conclusions. Reardon and Kahnweiler (1980) found sex and academic achievement differences in their tactile board choice study. This effect may be coming through in this study as well. This sample was sex biased (male), and an achievement bias (high) was also evident. One must also take into account the novelty effect of using V.D.U. screens, and the general expectancy of exactitude that computers and micro-processors induce in people. What may happen is that the V.D.U. form is felt by subjects to be more accurate than the pencil-and-paper form. This sort of impression is reinforced by people who wear digital watches. Whereas a person with an extremely accurate analog watch may say the time is "ten to ten", the digital watch user tends to say that it is "nine forty eight". The latter implies exactitude even though his timepiece may be

wildly inaccurate. This is another facet of computer administered testing which needs to be investigated.

FURTHER RESEARCH

The ideas pursued here need further investigation. The reliability check needs a larger, strictly matched sample, preferably one which encounters the A.P.U. during guidance; to make the sample realistic. The idea of exactitude may be the more important issue at this stage. Thompson (1973) has warned of the effects of implied exactitude in inventories, and this concept applied to computer administered tests of any kind may explain the positive results of researchers in the field of testee reaction to testing. (Bringmann and Christian, Miller and Cochran)

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APPENDIX ONE

Explanation and Listing of the Program

This program was written to explore the possibility of administering the A.P.U. Interests Guide on a micro computer of the type now becoming available in New Zealand, especially in secondary schools.

The equipment used was a Tandy Corporation Radio Shack T.R.S. 80 system, with expansion interface attached, giving Random Access Memory (R.A.M.) capacity of 32k. This equipment was used for developing the program as the editing facilities far outweigh those of the Apple, an alternative system that would have been available.

Three major obstacles had to be overcome in the development of the program. The presentation format, a compact ranking and scoring system, and a format for the communication of results.

The presentation of Activity pairs was written in two parts. First, each set of pairs was given a single line, as shown, for example, in line 200.

```
200  X=2:Y=1: A$= "STUDY THE PROPERTIES OF RADIO
     ACTIVE MATERIALS": B$="TREAT AND BANDAGE THE
     WOUNDS OF PEOPLE INJURED IN ACCIDENTS":GOSUB 3000
```

This line assigns values to X and Y, which define the appropriate scoring category to which A$ and B$, respectively belong. These categories are: 1, Social Service; 2, Scientific; 3, Artistic; 4, Literary; 5,General Service; 6, Computational; 7, Natural; 8, Practical.

The A$ and B$ strings are accessed at line 3000 by the GOSUB Command:

```
3000  A=A+1: C$="Ø": D$=" ": E$=" ":CLS:PRINT @ Ø, A:
      PRINT:PRINT:PRINT"(A)";:PRINT A$:PRINT:PRINT:
      PRINT:"OR":PRINT"(B)";B$: PRINT:PRINT:PRINT------
      -------CHOOSE (Z) OR (B);:INPUT C$
```

(A = the activity pair number)

After the subject has answered each section, the results are accumulated into the file (Lines 4000-4060), and command returns to the next activity pair where x, y, A$, and B$ are redefined.

The advantage of this format is that where R.A.M. storage is limited, the activity pairs can be entered via a disk or tape file. Use of files does slow the process, however.

The second problem was that of ranking the scores for presentation. Ranking in BASIC where space is limited is difficult, however the system used here reduces the ranking to 14 lines, 8 of which are used to define strings. The listing reference is lines 5875-6070.

The final, and most important problem, lay in the communication of results to the subject and the counsellor. Initial data is in the form of a summary, ranked according to preference, and including a summary score given by the algorithm devised by Closs (pg 152, A.P.U. Manual, 1975). These data are shown in plate six. The data were ranked by preference score rather than summary score to allow the administrator to demonstrate the effect of preference and Like minus Dislike scores to the subject. This effect is demonstrated by the NA and AR plots on plate seven.

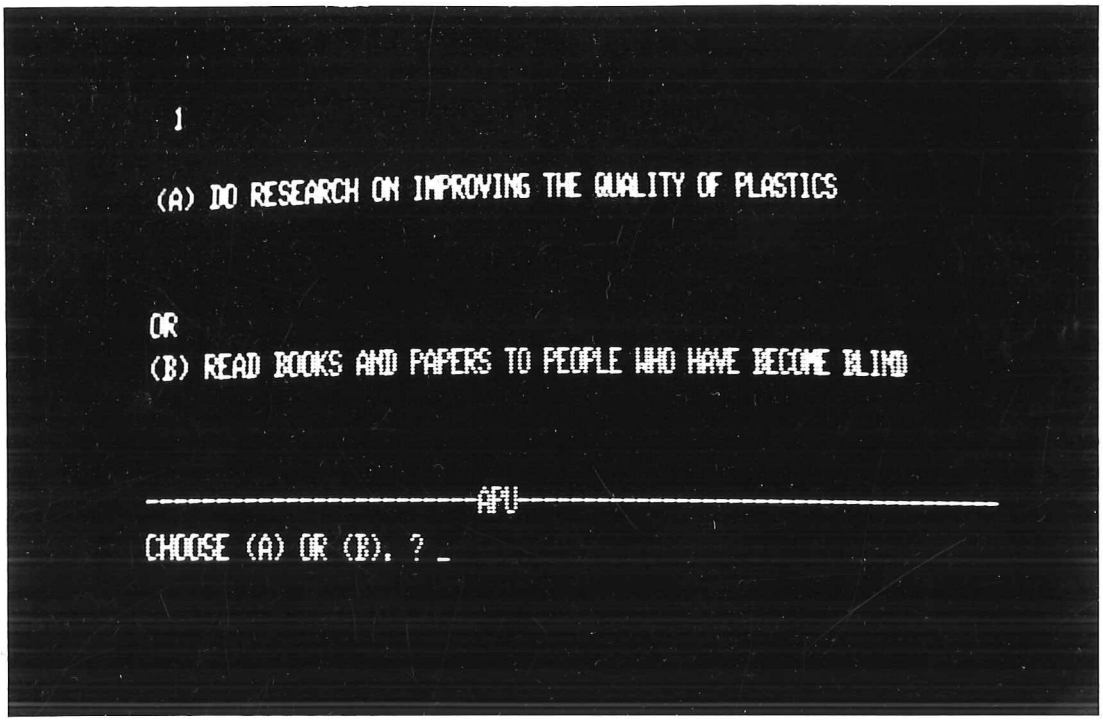
Miller and Cochran (1979), in a comparison of four methods of reporting results to students, cite evidence favouring the use of audio-visual presentation, on the grounds that result recall and overall satisfaction of subjects is higher. Thus, the bar graph, interpreted by the administrator, is probably the best way to communicate, visually, the results.

On initial evaluation of the program, and on consultation with some regular A.P.U. users, two further developments are being implemented. These involve (a) updating the scoring method, to give the counsellor more information to work with. This takes the form of answers to individual questions, set out on the same format as the questions on pages 113-128 of the A.P.U. Manual; and (b) transferring the program to Applesoft BASIC, as it appears that Apple computers are currently being purchased by many schools in this area. For any system under 32K R.A.M., the fulfillment of (a) means a file system for pairs of activities has to be used.

Completion of the A.P.U. via the program is relatively simple, more so, according to the subjects in Part II, than the pencil and paper form.

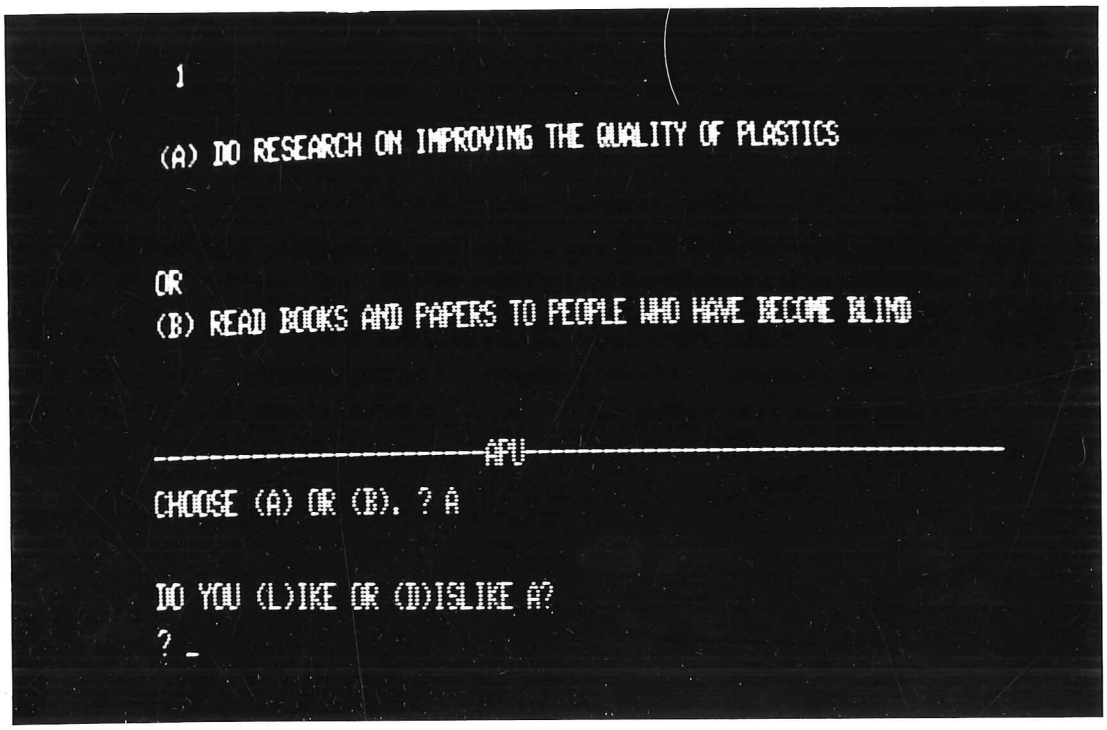
Plate 1 gives the initial presentation of the pairs, requiring a choice of Preference between activities A and B. Only [A] or [B] can be entered. The program rejects any other symbols.

PLATE ONE



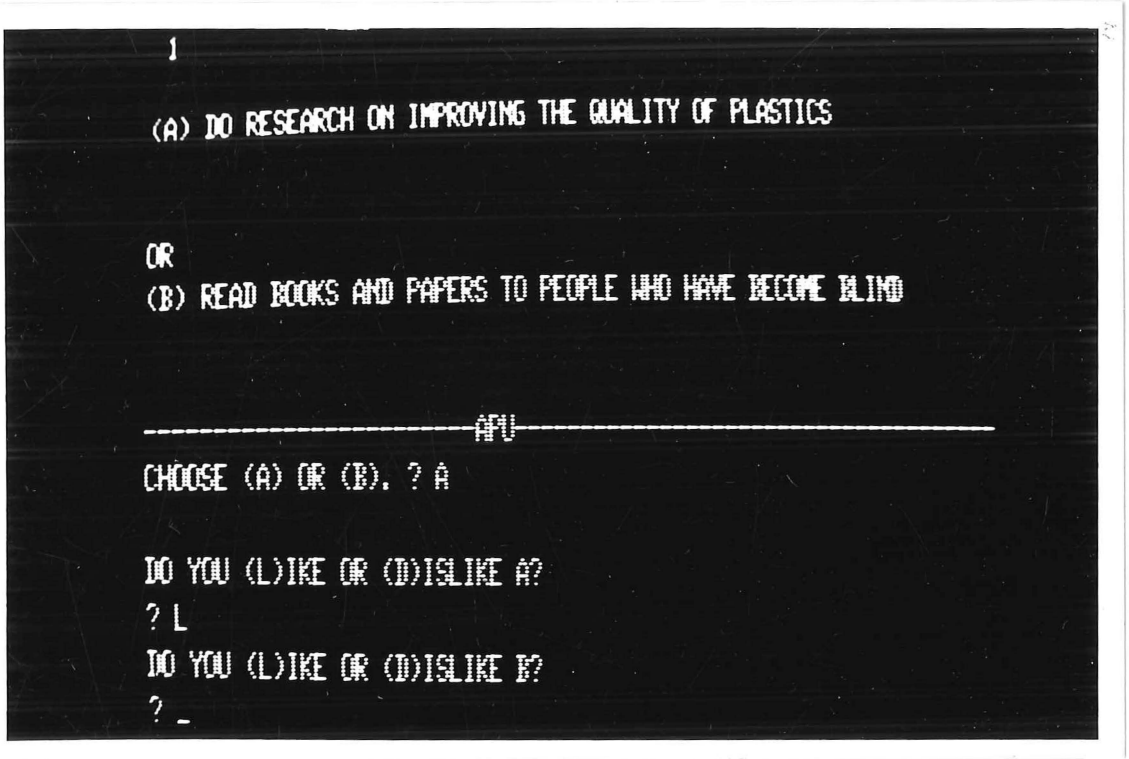
Having entered [A] , the program asks whether the subject likes, dislikes, or feels neutral about activity A (see plate 2). The options are entry of [L] , [D] , or the [ENTER] Key by itself, which counts as neutral.

PLATE TWO



On entry (here being [L]) a similar choice is presented for Activity B. (Plate 3)

PLATE THREE



Plates 4 and 5 show both the Neutral and Dislike entries for Activity B. Evident also is the 'Check' line. If a subject enters the wrong symbol, i.e. an [L] for a [D] or [B] for [A] , the entry of [1] at this point will present the activity pair again, without scoring them. On entry of [Ø] the answers are accumulated in the scoring files, and the next activity pair are presented.

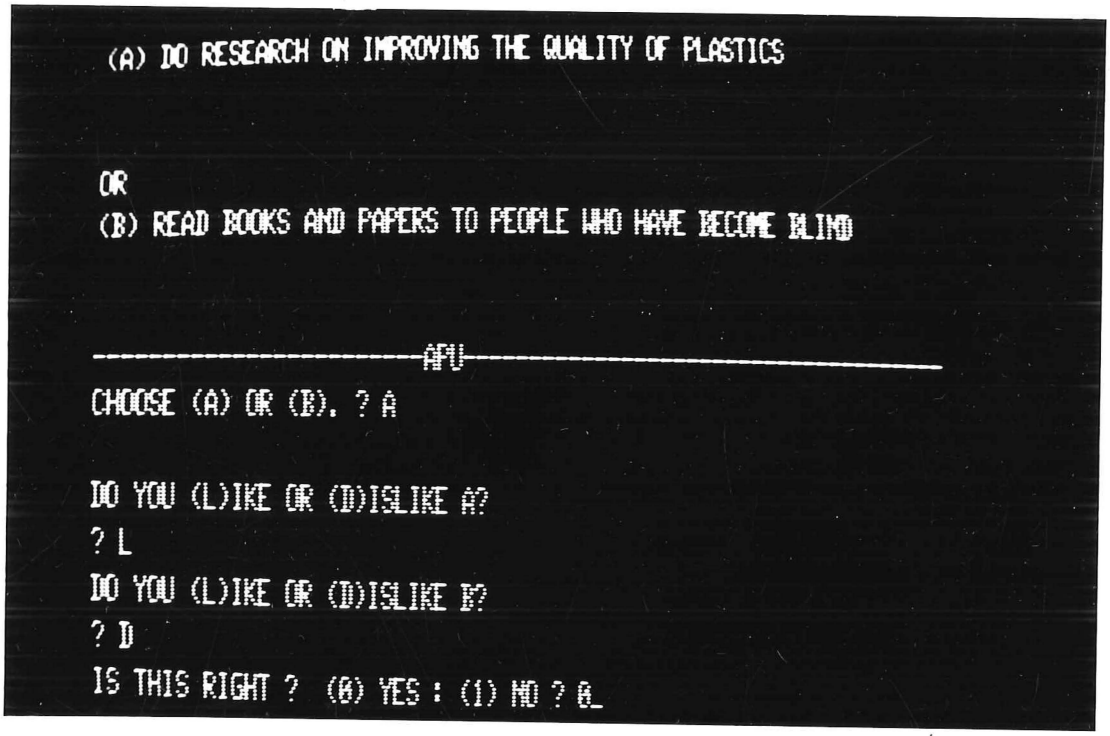


PLATE FIVE

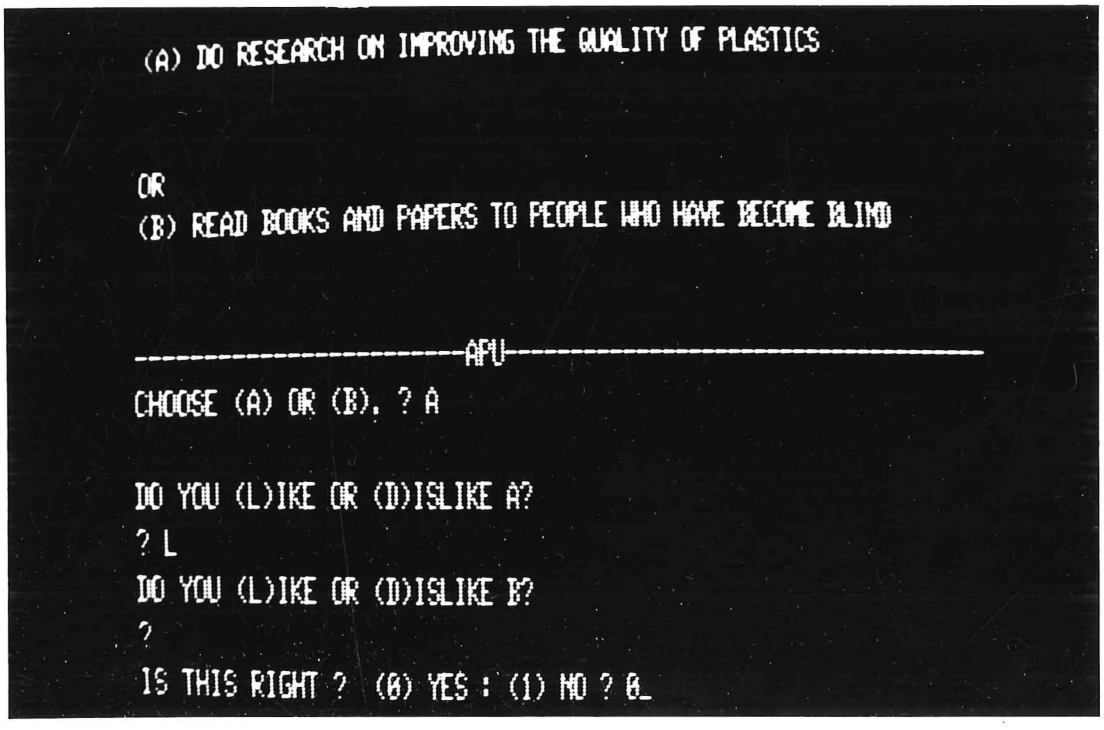


Plate 6 shows the presentation of data, and the options open for the administrator. Plate 7 shows option (1), the PLOT. On pressing [ENTER] , the options are presented again. Thus, the administrator may jump from DATA to PLOT and back again, to demonstrate a point.

PLATE SIX

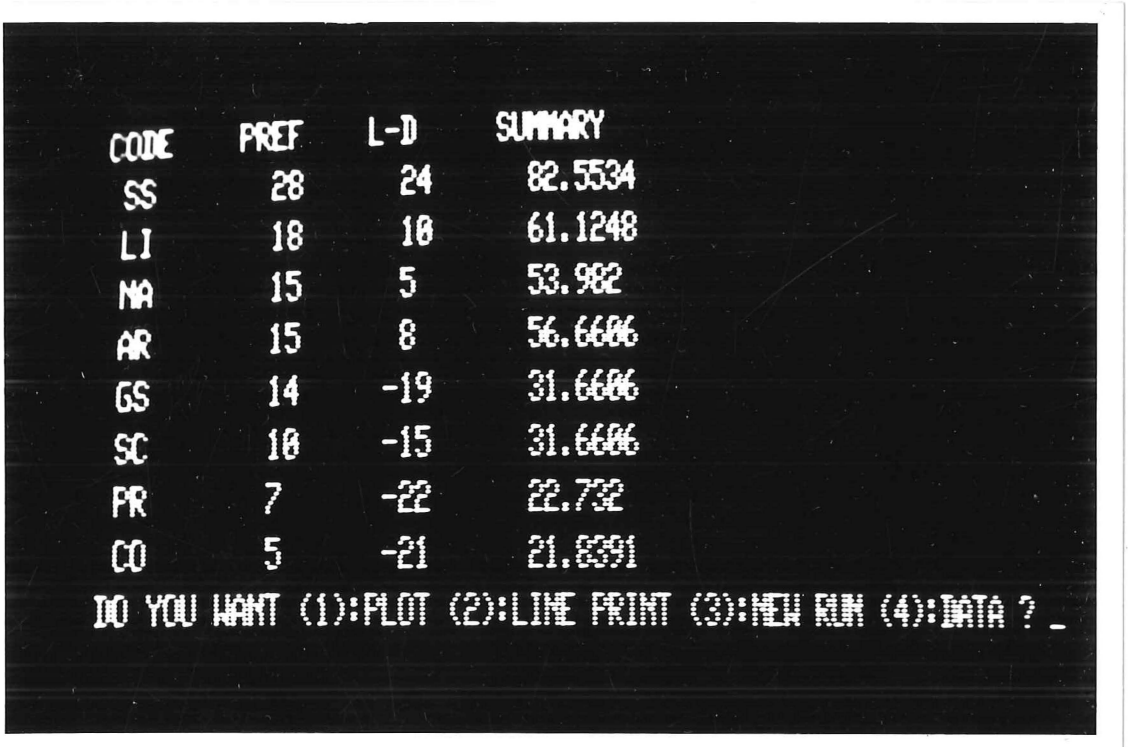
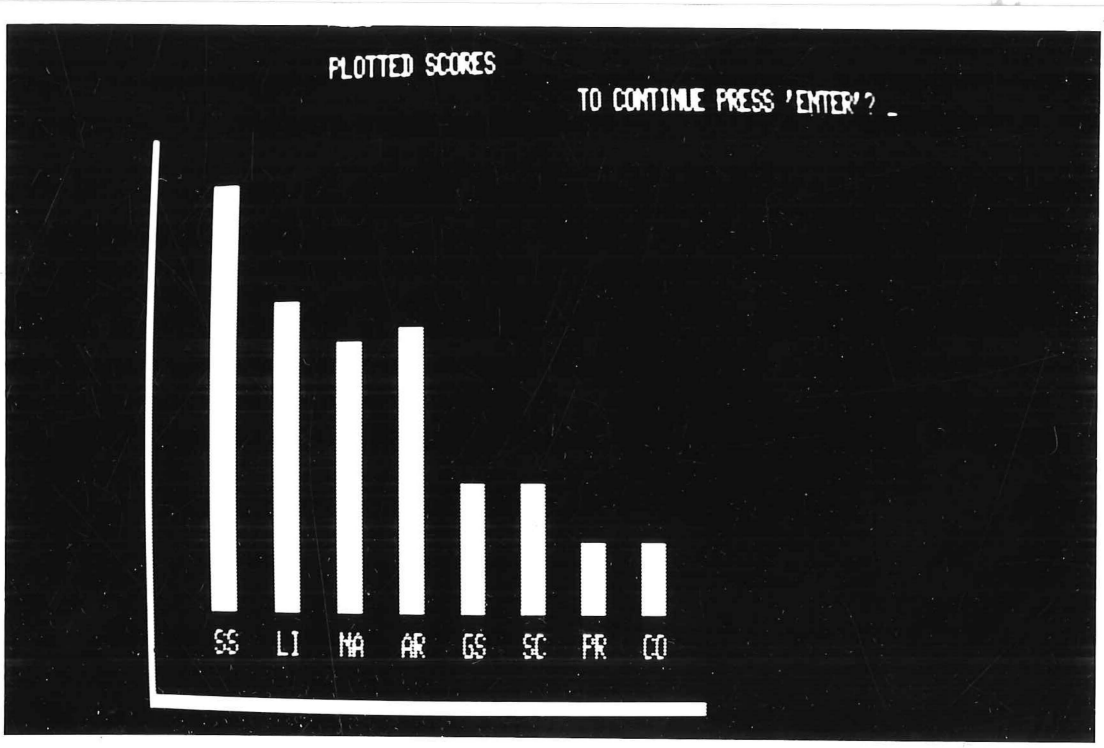


PLATE SEVEN



The following listing does not include the format at line 3000, this having been given in the text. Line 200 is a specimen set of activity pairs, from the standard male form, and is one example of the 112 such lines. School counsellors will probably wish to insert the advanced forms, especially for use with the sixth and seventh forms.

```
5 ON ERROR GOTO 12000
10 CLEAR 5000
14 CLS:SS=0:SC=0:AR=0:GS=0:CO=0:NA=0:PR=0:SL=0:SD=0:a=0
20 CLS:PRINTCHR$(23),"A.P.U. VOCATIONAL INTERESTS GUIDE":
   FORI=0TO3000:NEXT
30 CLS:PRINT@0,"THIS IS AN OCCUPATIONAL INTERESTS GUIDE:
31 PRINT,"-: IT IS DESIGNED TO HELP YOU FIND WHAT SORT OF
   JOB YOU LIKE"
32 PRINT,"-:CHOOSE AS IF YOU COULD DO ANY JOB, FOR A DAY"
33 PRINT,"-:PLEASE ANSWER ALL QUESTIONS AS HONESTLY AS YOU
   CAN"
40 PRINT,"*******THIS IS NOT A TEST*************"
41 PRINT,"THERE ARE ONLY TWO THINGS TO REMEMBER"
42 PRINT,"1; ONLY TYPE IN WHAT YOU ARE ASKED TO, THIS SAVES
   TIME"
43 PRINT,"2;ALWAYS PRESS THE WHITE *ENTER* KEY AFTER YOU
   HAVE TYPED SOMETHING I
44 PRINT," PRESS THAT *ENTER* KEY TO GO ON"
45 INPUT
50 PRINT @0,"YOU WILL BE GIVEN PAIRS OF JOBS"
51 PRINT,"...FIRST CHOOSE WHICH ONE OF THE PAIR YOU WOULD
   RATHER DO"
52 PRINT,"(SAY, FOR A DAY)"
53 REM HERE A SCREEN DISPLAY IS INSERTED WITH TWO ACTIVITIES
54 PRINT, "YOU MUST TYPE IN EITHER A OR B TO SHOW WHICH YOU
   WOULD RATHER DO"
55 PRINT,"REMEMBER THE 'ENTER'KEY": INPUT Z$
70 PRINT,"THEN YOU SAY WHETHER YOU LIKE OR DISLIKE JOB A"
71 PRINT,"BY TYPING IN (L) FOR LIKE AND (D) FOR DISLIKE,
   THEN PRESS THE 'ENTER'"
72 PRINT,"IF YOU CAN'T DECIDE, PRESS THE 'ENTER' TO SHOW YOU
   ARE NEUTRAL"
73 INPUTZ$
80 PRINT,"THEN DO THE SAME FOR JOB B, (L)IKE, (D)ISLIKE, OR
   NEUTRAL":INPUTZ$
90 CLS:PRINT@56,"IF YOU ARE READY, TYPE IN 'GO' AND BEGIN"
91 PRINT,"IF YOU ARE NOT SURE, TYPE IN 'NO'. **REMEMBER THE
   'ENTER' KEY"
92 INPUTY$
100 IF Y$="GO" THEN 200 ELSE 30
190 REM ****AT 200 THE PRESENTATION OF QUESTIONS BEGINS
191 REM THE 'X=' DELINEATES WHICH SCORE CATEGORY JOB A IS
    ASSOCIATED WITH
192 REM THE 'Y=' DOES THE SAME FOR JOB B
```

```
193 REM A$ AND B$ ARE STRINGS WHICH PLACE THE JOBS OF THAT
    QUESTION
194 REM IN THE PRESENTATION FORMAT DESCRIBED IN LINE 3000
195 REM Q.200 IS AN EXAMPLE OF THE 112 SETS OF PAIRS USED
    IN THE FINAL RUN
196 REM Q.200 IS THE FIRST QUESTION.
200 X=2:y=1:A$="STUDY THE PROPERTIES OF RADIOACTIVE
    MATERIALS":B$="TREAT AND BANDAGE THE WOUNDS OF PEOPLE
    INJURED IN ACCIDENTS":GOSUB3000
1320 GOTO 12000
2990 REM AT 3000 WE PRESENT THE TWO JOBS, AND, PROGRESSIVELY,
     THE QUESTIONS
3000 A=A+1:C$="0":D$="":E$="":CLS:PRINT (FORMAT INSERTED)"
     CHOOSE A OR B":INPUT C$LIF C$="A" OR C$="B" THEN 3010
     ELSE 3005
3005 A+A-1:GOTO3000
3010 D$="":PRINT@768,"DO YOU (L)IKE OR (D)ISLIKE JOB A?";:
     INPUTD$:IFD$="L"
     ORD$="D"ORD$=" "THEN 3020 ELSE 3010
3020 E$="":PRINT,"DO YOU (L)IKE OR (D)ISLIKE B?":INPUTE$:
     IF E$="L"OR E$="D" OR E$=" "THEN 3025 ELSE 3020
3022 REM 3025 IS A CHECK ON THE ANSWERS FOR THE SUBJECT. IF
     WRONG, THE QUESTION IS PRESENTED AGAIN, IN ITS ENTIRITY
3025 INPUT"IS THIS RIGHT? (1) YES; (2) NO; "; JH
3026 IF HJ=2 THEN 3005 ELSE 3030
3030 GOTO 4000
3990 REM 4000 - 4007 IS RAW DATA ACCUMULATION AND SORT
4000 Z=0:ZL=0:ZD=0
4001 IF C$="A" THEN Z=Z+1
4002 IF D$+"L" THEN ZL=ZL+1
4003 IF D$="D" THEN ZD=ZD-1
4004 W=0:WL=0:WD=0
4005 IF C$="B" THEN W=W+1
4006 IF E$="L" THEN WL=WL+1
4007 IF E$="D" THEN WD=WD-1
4009  REM  4010 - 4060 SORTS THE DATA, AND RETURNS IT TO THE
     NEXT QUESTION
4010 IF  X=1 THEN SS=SS+Z
4001 IF X=2 THEN SC=SC+Z
4012 IF X=3 THEN AR=AR+Z
4013 IF X=4 THEN LI-LI+Z
4014 IF X=5 THEN GS=GS+Z
4015 IF X=6 THEN CO=CO+Z
4016 IF X=7 THEN NA=NA+Z
4017 IF X=8 THEN PR=PR+Z
4020 IF Y=1 THEN SS=SS+W
4021 IF Y=2 THEN SC=SC+W
4022 IF Y=3 THEN AR=AR+W
4023 IF Y=4 THEN LI-LI+W
4024 IF Y=5 THEN GS=GS+W
4025 IF Y=6 THEN CO=CO+W
4026 IF Y=7 THEN NA=NA+W
4027 IF Y=8 THEN PR=PR+W
4030 IF X=1 THEN AL=AL+(ZL+ZD)
4031 IF X=2 THEN BL-BL+(ZL+ZD)
4032 IF X=3 THEN CL=CL+(ZL+ZD)
4033 IF X=4 THEN DL=DL+(ZL+ZD)
4034 IF X=5 THEN EL=EL+(ZL+ZD)
4035 IF X=6 THEN FL=FL+(ZL+ZD)
4036 IF X-7 THEN GL=GL+(ZL+ZD)
```

```
4037 IF X=8 THEN HL=HL+(ZL+ZD)
4040 IF Y=1 THEN AL=AL+(WL+WD)
4041 IF Y=2 THEN BL=BL+(WL+WD)
4042 IF Y=3 THEN CL=CL+(WL+WD)
4043 IF Y=4 THEN DL=DL+(WL+WD)
4044 IF Y=5 THEN EL=EL+(WL+WD)
4045 IF Y=6 THEN FL=FL+(WL+WD)
4046 IF Y=7 THEN GL=GL+(WL+WD)
4047 IF Y=8 THEN HL=HL+(WL+WD)
4050 IF A=112 THEN 5000
4060 REUTRN
5000 GOTO 5875
8031 TAB (25)Q(5);TAB(30)Q(6);TAB(35)Q(7);TAB(40)Q(8)
8040 FOR I=3 TO 47: SET(0,I0:NEXT I
8050 FOR I=0 TO 90: SET(I,47):NEXT I
8060 C=10
8070 FOR K-1 TO 8:FOR I-C TO C+3: FOR J=T(K) TO 41:SET(I,J)
8080 NEXT J: NEXT I
8090 C=C_10: NEXT K
8100 PRINT @64,TAB(35)"TO CONTINUE, PRESS ENTER":INPUT
8110 GO TO 7090
8200 LPRINT"RANK CODE"
8201 FOR I=1 TO 8:LPRINT Q(I):NEXT I
8202 LPRINT"PREF":FORI=1TO8:LPRINT,M(1,I):NEXT I
8203 LPRINT,"L-D":FORI=1TO8:LPRINT,M(2,I):NEXT I
8204 LPRINT,"SUMMARY"
8205 FOR I-1 TO 8:LPRINT,Q(I): " ": T(I)
8210 CLS:GOTO 7090
12000 PRINT "SS;SS;AL:PRINT "SC";SC;BL:PRINT "AR;AR;CL:
     PRINT "LI;LI;D: PRINT "GS";GS;EL:PRINT "CO;CO;FL:
     PRINT "NZ";NA;GL:PRINT "PR";PR;HL
13000 END
```

APPENDIX TWO

The Question and Score sheets which were used in Chapter Three.

Following the instructions for the A.P.U. were the appropriate 112 pairs of activities for the Male or Female Standard Forms.

1 The eight categories below represent different types of jobs. At the front of your score sheet are spaces for you to put these categories in the order which you think they suit you. Put the LETTER of the category you would most like to work in beside the number (1) space. The Letter of the category you would next most like to work in is placed beside number (2) and so on.

*** HINT *** If you get stuck, choose the one you least like, and work up the order.

2 After you have sorted out the Order you like them in, place them on the scale underneath the Ranking. To do this, place the LETTER on the scale where you feel it suits you. This means they can be as close together or as far apart as you like. They could be spread out or all at one end. (This would happen if you liked them all, or didn't like any of them). You don't have to put the letter beside the marks, they are just to help you judge distances.

M

CATEGORIES:

(A) .. SCIENTIFIC : experimentation and research, as well as invention and design. Finding out how things work, and the principles behind the work.

(B) .. SOCIAL SERVICE : helping people in need, such as the ill, the mentally and physically handicapped, and those who are homeless.

(C) .. GENERAL SERVICE : involves contact with people through work which provides a service of some kind. In shops, deliveries or on the phone.

(D) .. LITERARY : involves the enjoyment of writing creatively, through novels, poetry, magazine or newspaper articles.

(E) .. ARTISTIC : this is concerned with the creation of visual art, drawing, painting, sculpture, pottery or architecture.

(F) .. COMPUTATIONAL: applying advanced mathematics to real life and real problems and circumstances.

(G) .. PRACTICAL : this involves use of the hands for practical purposes, such as carpentry or weaving.

(H) .. NATURAL : this category is working with plants and animals, usually in an outdoors situation.

3

A.P.U. INTEREST GUIDE

Each question gives you two activities.

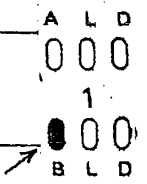
Q1	Grow flowers for a park .....A_{Q1}
	Guide people on bus tours ...B

There are THREE things to do

FIRST

You must choose which activity you would like to do most for a day
Even if you dislike both of them you have to choose one

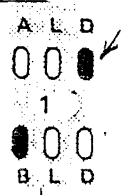
If I would rather be a guide on bus tours,
I fill in box 'B' for that question.



SECOND

Now look at activity 'A', and decide whether you LIKE, DISLIKE, or feel NEUTRAL about it.

If I feel NEUTRAL
I leave the 'L' and the 'D' boxes blank
If I like it, I shade in the 'L' box
If I dislike it, I shade in the 'D' box
Let's say I dislike it .....



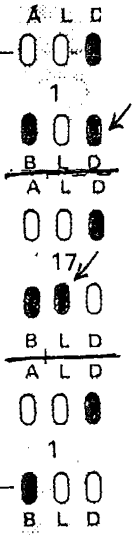
THIRD

Now we do the same for the second activity. LIKE, DISLIKE OR NEUTRAL.

I will say that I dislike being a guide, too
This means that I end up, for Q1, with this .....

If I had liked being a guide, I would have
marked the 'L', and ended up with .....

If I was NEUTRAL about being a guide, I would have
left the 'L' + 'D' boxes next to the 'B' unmarked,
and would have got this .....



You can see that you can have any mixture of these at all.

REMEMBER.... you must choose A or B first, then decide about how you feel about the two activities.

SCORING SHEETS

There are six parts to this Section.

Please make sure that you complete all six

Tick the box next to the school which you attend

ASHBURTON..... ☐

BURNSIDE..... ☐

MAIREHAU..... ☐

RICCARTON..... ☐

ST. THOMAS'S..... ☐

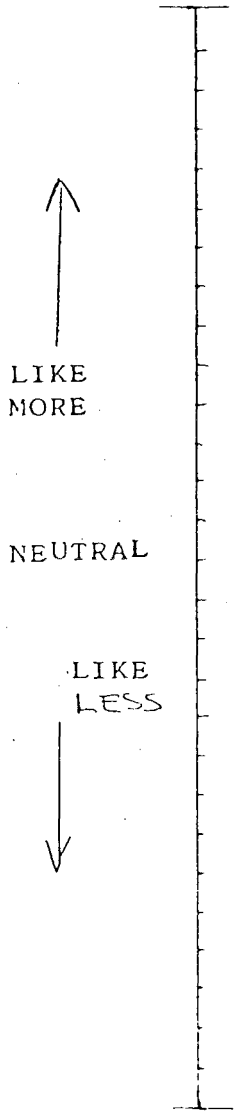
VILLA MARIA..... ☐

Name	Emp.	Unemp.	Phone

1 RANKING;

(1) ..... Would most like to work in this area..
(2) .....
(3) .....
(4) .....
(5) .....
(6) .....
(7) .....
(8) .....would least like to work in this area..

2 SCALING;



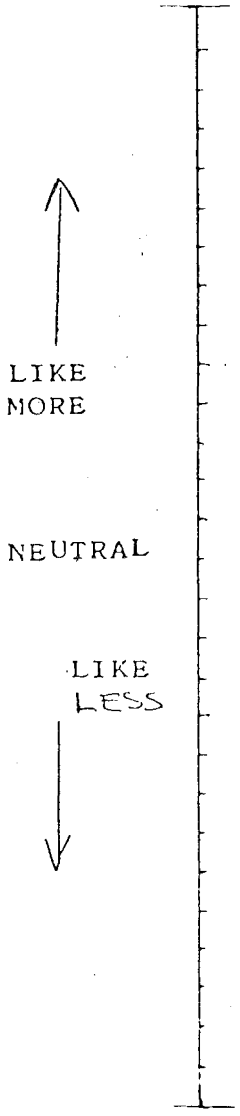
WITHOUT thinking about the first ranking, you should now repeat the ranking and scaling of the eight categories.

4

RANKING;

(1) ..... Would most like to work in this area..
(2) .....
(3) .....
(4) .....
(5) .....
(6) .....
(7) .....
(8) .....would least like to work in this area..

5 SCALING;



6

YOU MUST ANSWER THIS SECTION.

(Please place a cross in the box which applies to you)

1. SEX ... Male ☐
Female ☐

2 AGE ... 14 ☐
15 ☐
16 ☐
17 ☐
18 and over ☐

3. RELIGION ... Church of England ☐
Catholic ☐
Methodist ☐
Protestant ☐
No Religion ☐
Other _____
(Please specify)

4. Parents Occupation :
Mother .....
Father .....

5. Have you ever been to a school counsellor for advice on jobs...
eg A counsellor who visited school? ☐
Counselling elsewhere ? ☐
None of the above ☐

6. If so, how long did you spend with them?..... hours

ANSWER THIS SECTION IF YOU ARE A STUDENT

Which form are you in? Form 5 ☐ How many years have you been at school?
6 ☐ 3 ☐ 5 ☐
7 ☐ 4 ☐ 6 ☐

When you leave school what job would you most like to do? _____

Did you return to school this year because you could not find a job? Yes ☐
No ☐

UNEMPLOYED ANSWER THIS SECTION

Have you.... been unemployed since you left school? ☐
had a job (full time) since you left school? ☐

What job would you most like to do? _____

Which form would you be in if you were still at school? 3 ☐ 4 ☐ 5 ☐
6 ☐ 7 ☐

EMPLOYED (FULL TIME) ANSWER THIS SECTION

What is your occupation? _____

Is this the job you would most like to do? Yes ☐ No ☐
If not what is? _____

What form would you be in if you were still at school 3 ☐ 4 ☐ 5 ☐
6 ☐ 7 ☐

APPENDIX THREE

DATA FROM CHAPTERS THREE AND FOUR

Part One: A listing of the content of the sample used in Chapter Three

Part Two: A breakdown of the correlation of the first scaling with the A.P.U. summary scores by school, sex, and form.

PART ONE

CAT SCHOOL

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
ASHBURTON	1.	60	25.0	25.0	25.0
BURNSIDE	2.	60	25.0	25.0	50.0
RICCARTON	4.	60	25.0	25.0	75.0
VILIA MARIA	6.	60	25.0	25.0	100.0
	TOTAL	240	100.0	100.0	

MEAN	3.250	MEDIAN	2.500	MODE	1.000
STD DEV	1.924	VARIANCE	3.703	SKEWNESS	0.280

VALID CASES 240 MISSING CASES 0

SEX

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
MALE	1.	82	34.2	34.2	34.2
FEMALE	2.	158	65.8	65.8	100.0
	TOTAL	240	100.0	100.0	

MEAN	1.658	MEDIAN	1.741	MODE	2.000
STD DEV	0.475	VARIANCE	0.226	SKEWNESS	-0.672

VALID CASES 240 MISSING CASES 0

RELIGION

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
C OF E	1.	46	19.2	19.5	19.5
CATHOLIC	2.	80	33.3	33.9	53.4
METHODIST	3.	24	10.0	10.2	63.6
PRESBYTERIAN	4.	49	20.4	20.8	84.3
NO RELIGION	5.	26	10.8	11.0	95.3
OTHER	6.	11	4.6	4.7	100.0
	9.	4	1.7	MISSING	100.0
	TOTAL	240	100.0	100.0	

MEAN	2.839	MEDIAN	2.400	MODE	2.000
STD DEV	1.473	VARIANCE	2.170	SKEWNESS	0.474

VALID CASES 236 MISSING CASES 4

YRS AT SCHOOL

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	3.	94	39.2	39.2	39.2
	4.	70	29.2	29.2	68.3
	5.	72	30.0	30.0	98.3
	6.	4	1.7	1.7	100.0
	TOTAL	240	100.0	100.0	

MEAN	3.942	MEDIAN	3.871	MODE	3.000
STD DEV	0.871	VARIANCE	0.758	SKEWNESS	0.267
VALID CASES	240	MISSING CASES	0		

FRM AT SCHOOL

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	5.	80	33.3	33.3	33.3
	6.	80	33.3	33.3	66.7
	7.	80	33.3	33.3	100.0
	TOTAL	240	100.0	100.0	

MEAN	6.000	MEDIAN	6.000	MODE	5.000
STD DEV	0.818	VARIANCE	0.669	SKEWNESS	0.000
VALID CASES	240	MISSING CASES	0		

AGE IN YEARS

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	14.	9	3.7	3.7	3.7
	15.	79	32.9	32.9	36.7
	16.	69	28.8	28.8	65.4
	17.	76	31.7	31.7	97.1
	18.	7	2.9	2.9	100.0
	TOTAL	240	100.0	100.0	

MEAN	15.971	MEDIAN	15.964	MODE	15.000
STD DEV	0.957	VARIANCE	0.915	SKEWNESS	0.001
VALID CASES	240	MISSING CASES	0		

RETURN TO SCHOOL

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
COULDN'T FIND JOB	1.	22	9.2	9.2	9.2
CHOICE	2.	216	90.0	90.8	100.0
	9.	2	0.8	MISSING	100.0
	TOTAL	240	100.0	100.0	

MEAN	1.908	MEDIAN	1.949	MODE	2.000
STD DEV	0.290	VARIANCE	0.084	SKEWNESS	-2.832
VALID CASES	238	MISSING CASES	2		

HRS OF COUNSELLING

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	0.	4	1.7	4.7	4.7
	1.	48	20.0	55.8	60.5
	2.	17	7.1	19.8	80.2
	3.	8	3.3	9.3	89.5
	4.	1	0.4	1.2	90.7
	5.	5	2.1	5.8	96.5
MORE THAN FIVE	8.	3	1.2	3.5	100.0
	9.	154	64.2	MISSING	100.0
	TOTAL	240	100.0	100.0	

MEAN	1.849	MEDIAN	1.313	MODE	1.000
STD DEV	1.634	VARIANCE	2.671	SKEWNESS	2.269
VALID CASES	86	MISSING CASES	154		

CON COUNSELLING

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
SCHOOL	1.	40	16.7	17.7	17.7
VISITING	2.	22	9.2	9.7	27.4
ELSEWHERE	3.	23	9.6	10.2	37.6
NONE	4.	141	58.8	62.4	100.0
	9.	14	5.8	MISSING	100.0
	TOTAL	240	100.0	100.0	

MEAN	3.173	MEDIAN	3.699	MODE	4.000
STD DEV	1.186	VARIANCE	1.406	SKEWNESS	-0.985
VALID CASES	226	MISSING CASES	14		

CHO CHOICE OF OCC

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	32	13.3	16.1	16.1
	2.	24	10.0	12.1	28.1
	3.	29	12.1	14.6	42.7
	4.	86	35.8	43.2	85.9
	5.	13	5.4	6.5	92.5
	6.	8	3.3	4.0	96.5
	7.	6	2.5	3.0	99.5
	8.	1	0.4	0.5	100.0
	9.	41	17.1	MISSING	100.0
	TOTAL	240	100.0	100.0	

MEAN	3.387	MEDIAN	3.669	MODE	4.000
STD DEV	1.513	VARIANCE	2.289	SKEWNESS	0.143
VALID CASES	199	MISSING CASES	41		

PAO FATHERS OCC

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	23	9.6	10.6	10.6
	2.	51	21.2	23.6	34.3
	3.	66	27.5	30.6	64.8
	4.	30	12.5	13.9	78.7
	5.	26	10.8	12.0	90.7
	6.	12	5.0	5.6	96.3
	7.	5	2.1	2.3	98.6
	8.	3	1.2	1.4	100.0
	9.	24	10.0	MISSING	100.0
	TOTAL	240	100.0	100.0	

MEAN	3.259	MEDIAN	3.015	MODE	3.000
STD DEV	1.563	VARIANCE	2.444	SKEWNESS	0.749
VALID CASES	216	MISSING CASES	24		

MAO MOTHERS OCC

The following tables (MAO, PAO, CHO) are taken from the survey and classified according to the scale of P. Davis An Occupational Ranking Scale for New Zealand (1974)

CATEGORY LABEL	CODE	ABSOLUTE FREQ	RELATIVE FREQ (PCT)	ADJUSTED FREQ (PCT)	CUM FREQ (PCT)
	1.	14	5.8	6.3	6.3
	2.	5	2.1	2.3	8.6
	3.	11	4.6	5.0	13.5
	4.	70	29.2	31.5	45.0
	5.	7	2.9	3.2	48.2
	6.	15	6.3	6.8	55.0
	7.	2	0.8	0.9	55.9
	8.	98	40.8	44.1	100.0
	9.	18	7.5	MISSING	100.0
	TOTAL	240	100.0	100.0	

MEAN	5.676	MEDIAN	5.767	MODE	8.000
STD DEV	2.317	VARIANCE	5.369	SKEWNESS	-0.362
VALID CASES	222	MISSING CASES	18		

PART TWO

CRITERION VARIABLE *CORRELATIONS*
BROKEN DOWN BY CAT
BY SEX
BY FRM

VARIABLE	CODE	SUM	MEAN	STD DEV	VARIANCE		N
ENTIRE POPULATION		163.8384	0.6827	0.2232	0.0498		240
ASHBURTON		44.1604	0.7360	0.1787	0.0319	(	60)
SEX M	1.	21.8203	0.7793	0.1456	0.0212	(	28)
FRM	5.	7.8980	0.7898	0.1394	0.0194	(	10)
FRM	6.	5.8765	0.7346	0.2107	0.0444	(	8)
FRM	7.	8.0458	0.8046	0.0837	0.0070	(	10)
SEX F	2.	22.3401	0.6981	0.1979	0.0392	(	32)
FRM	5.	6.0668	0.6067	0.1872	0.0351	(	10)
FRM	6.	8.3883	0.6990	0.2116	0.0448	(	12)
FRM	7.	7.8850	0.7885	0.1636	0.0268	(	10)
BURNSIDE		40.3949	0.6732	0.2135	0.0456	(	60)
SEX M	1.	16.5376	0.6615	0.1668	0.0278	(	25)
FRM	5.	6.8788	0.6253	0.1705	0.0291	(	11)
FRM	6.	4.2108	0.7018	0.1471	0.0216	(	6)
FRM	7.	5.4481	0.6810	0.1859	0.0346	(	8)
SEX F	2.	23.8573	0.6816	0.2435	0.0593	(	35)
FRM	5.	4.6774	0.5197	0.3418	0.1168	(	9)
FRM	6.	10.3504	0.7393	0.1551	0.0241	(	14)
FRM	7.	8.8296	0.7358	0.2025	0.0410	(	12)
RICCARTON		39.5491	0.6592	0.2494	0.0622	(	60)
SEX M	1.	18.1090	0.6244	0.2939	0.0864	(	29)
FRM	5.	2.4806	0.6201	0.2711	0.0735	(	4)
FRM	6.	6.5397	0.5450	0.4223	0.1784	(	12)
FRM	7.	9.0888	0.6991	0.0857	0.0073	(	13)
SEX F	2.	21.4401	0.6916	0.1987	0.0395	(	31)
FRM	5.	12.0361	0.7523	0.1706	0.0291	(	16)
FRM	6.	5.0427	0.6303	0.2363	0.0558	(	8)
FRM	7.	4.3613	0.6230	0.1978	0.0391	(	7)
VILLA MARIA		39.7339	0.6622	0.2410	0.0581	(	60)
SEX F	2.	39.7339	0.6622	0.2410	0.0581	(	60)
FRM	5.	10.8240	0.5412	0.3373	0.1138	(	20)
FRM	6.	13.8888	0.6944	0.1537	0.0236	(	20)
FRM	7.	15.0210	0.7511	0.1345	0.0181	(	20)

TOTAL CASES = 240

APPENDIX FOUR

GUIDELINES FOR CAREER EDUCATION IN NEW ZEALAND SECONDARY SCHOOLS

Material supplied by the Vocational Guidance Services, Christchurch.

G U I D E L I N E S

F O R

C A R E E R E D U C A T I O N

I N S E C O N D A R Y S C H O O L S

May 1979

Introduction

The past decade has seen significant development in various aspects of guidance in New Zealand secondary schools. Much of this stems from "Guidance in Secondary Schools - Report of a Working Party" (July 1971), which reviewed the earlier beginnings in guidance provisions and set out patterns for their full development.

Not least in importance has been the growing recognition of the concept of career education, not as an additional "subject" but as a focus for personal development through the curriculum, and also as a foundation for individual vocational counselling. Largely under the lead of the Vocational Guidance Service, a considerable variety of approaches and programmes for career education have been introduced in many schools in the past five or six years. From a review of this activity, these guidelines have been drawn up for the purpose of leading further development in schools where this need is felt. They formulate both current practices and suggested developments, and are intended to provide a working plan rather than a final scheme.

Acknowledgements

The ideas and suggestions in the various sections that follow derive from a number of sources. Several sections are based on papers presented to the review course "Career Education and Work Exploration" held at Hogben House in July 1978, as reported in the statement "Considerations Relating to Career Education" produced as an outcome of that course. In particular, full acknowledgement is made to the following course contributors:

R G Oliver, Inspector of Secondary Schools, Auckland
- Course Director

D McMillan, Senior Guidance Adviser, Auckland Vocational Guidance Centre 1974-78 - sections on Career Education Curriculum and Staff Roles

W I Reid, District Vocational Counsellor, Hamilton
- section on Work Exploration

E J Wadsworth, Senior Lecturer in Education, University of Waikato
- "Propositions" (Appendix II)

Curriculum objectives and suggestions are drawn also from "Workshop Notes" produced by an earlier (July 1975) Hogben House Career Education course. Other material is contributed by R G Thomson, Senior Guidance Adviser, Christchurch Vocational Guidance Centre, who has also been responsible for editing the material from these various sources for this guidelines statement.

Note: The term "career" is used throughout with its broadest connotation, to refer to the occupational or employment future of any or all students.

A PROVIDING CAREERS GUIDANCE IN THE SCHOOL

1 Aims for the development of guidance provisions

> "The aim .... should be the provision, in each school, of programmes of teaching and discussion, and a network of advice and influence, which will bear on all students in the normal course of their school life."
>
> ("Guidance in Secondary Schools - Report of a Working Party" Department of Education, Wellington 1971: p.7)

From this recommendation for dual teaching and advisory approaches in guidance services, a full range of programmes in social education and provisions for personal guidance and counselling have developed. Within this broader field, the area of career guidance has shared in the development: programmes of career education have been introduced to complement the long-established careers advising provision.

While these guidelines are concerned primarily with the career education component, it is essential that its development be held in close relationship with the advisory function.

2 The two provisions in careers guidance

CAREER EDUCATION ---(complementary / interdependent)--- CAREERS ADVISING

- Incorporated in curriculum subjects	- An extracurricular and specialist function
- Taught by teaching staff	- Provided by guidance staff
- Classwork programmes for all students and levels	- Individual counselling at appropriate points
- To foster development of vocational knowledge and ideas	- To aid career exploring, planning, and decision-making
- With specialist support of guidance staff, and drawing on community resources	- With support of Vocational Guidance Service and other counselling services

3 Careers advising functions - provided by careers adviser, guidance counsellor, or guidance teacher.

Suggested priorities are:

a Provision of careers information: active dissemination through the school as well as on request - a well-managed "information system" is essential

b First-level advice: interpretation of information with students, and suggestions for further action; closer counselling and/or referral as appropriate to adviser's skills and student's needs

c Promotion of local "world of work" contacts: to develop employer-school relations and work exploration opportunities

d Participation in career education programmes: specialist contributions at appropriate points, and general assistance to teaching staff and in co-ordination of programmes and activities

...

4 Developing career education in the school - a suggested strateg

To provide effectively for this important aspect of the student's personal development, curriculum planning for an on-going school-wide programme is required. Appropriate steps in planning are:

a The place of career education in the school curriculum

i Does the staff as a whole recognise the purposes, nature, and place of career education?

(This is of first importance for ensuring the widest possibl participation. Points for discussion are provided in the following section B and related appendixes.)

ii What are the main elements of career education needed at each level?
How can these be developed to reach all students in the most appropriate form?
Which subject areas can best contribute, using available teaching skills and resources?

(Content and progression for career education programmes are suggested in section C.)

b Practical points in planning

i Who will co-ordinate the programme across the subjects and through the levels?

(An assigned responsibility for this, before detailed planning begins, is essential.)

ii Given placement of selected elements within subject areas, what teaching units will be appropriate at particular levels?
Are alternative approaches needed for particular groups?

iii How much time and staff commitment is desirable for each teaching unit? And what is practicable?

c Development of the programme units

The usual steps in planning teaching units should be followed:

i Define the objectives for the unit, appropriate to level and within the overall objectives of the programme.

ii Plan modules and topics, in terms of content and method, including variations for the needs of particular groups.

iii Select, adapt or develop resource materials and aids that will achieve the unit objectives. Would it be possible, profitable, and practicable to make use of community resource

d Evaluation of the programme and its various units

Appropriate methods of evaluating the teaching should be built into the planning of each unit and for the programme as a whole, related to the objectives in each case.

B CAREER EDUCATION - A FOCUS IN LEARNING

1 Every aspect of education, through providing for the acquisition of knowledge and development of various skills, is a preparation for living in the present as well as for the future. In that sense all education may be regarded as career education.

This longer-term dimension is however sometimes overlooked, and the immediate goals of examinations and completion of study courses dominate the student's horizon. For many students there appears to be a dichotomy between what they learn at school and how they prepare for life. They should be prepared in advance for the situations they will face in leaving school, taking up employment, facing periods of unemployment, and the need to find and follow satisfying leisure activities.

2 Career education adjusts the focus onto living, and in particular on the area of preparation for living and working in the community. For this purpose specific studies or modules should be introduced into various subject areas as well as in specific career education units in the school programme.

3 The frame of reference for career education is defined by those aspects of personal growth we are concerned to foster in the student. These are -

a Self-concept: knowing oneself
b Occupational concepts: knowing the world of work
c Occupational self-concept: knowing what one wants from work
d Life values: knowing what one wants from life beyond the work place

The four career education objectives are self-knowledge, opportunity awareness, decision-making ability, and transition skills.

4 The school may be a base from which career education takes place, but the home and family and various groups in the community, including employers and workers, may together play an equal part. Schools should draw on all such people and agencies as resources for career education programmes and units.

5 Career education is curriculum-based investigation of the world of work and the student's possibilities in that world. It has an important extension in various forms of work exploration, which carries the investigation through in first-hand learning experiences in workplace settings.

6 Career decisions are personal and so individual counselling must be provided at appropriate points through the school years.

7 The essential rationale for career education is the student's preparation for the transition from school to the world of work. For today's young people entry to the working world poses significant problems, for which the school has a compelling obligation to make positive provisions in its learning programmes. (Appendix I - "The Transition from School to Work" - gives selected extracts from overseas studies which clearly describe these problems, together with summaries of two approaches in guidance provisions to meet them.)

NOTE: Further points for discussion relating to the nature and place of career education are listed in Appendix II - "Propositions Relating to Vocational Development and Career Education."

C CAREER EDUCATION CURRICULUM

A progression for school career guidance programmes

Intention

Career education is to be seen as an ongoing programme throughout the school. It should provide a plan of continuing enquiry for students by which they can progressively clarify vocational concepts and their own career possibilities. During this search, no career choice will be regarded as a final commitment, but open to periodic review as students become better informed, more aware of themselves and their possibilities, and more confident of their vocational directions.

Objectives

These provide the basis for arranging teaching units, defining their content, and deciding on methods and learning experiences. They also provide the criteria for evaluation.

1 Self-knowledge and personal growth

To help students -
- to explore their interests and aptitudes;
- to become aware of their personal characteristics, potentialities, strengths and weaknesses;
- to identify and clarify their own values in terms of both their work expectations and what they want of life beyond work.

To provide opportunities for students to share and clarify their vocational attitudes, experiences, problems and plans with other students and adults. In so doing, to gain further experience in relating to others and to the world beyond home and school.

2 Opportunity awareness and appropriate aspirations

To provide many avenues by which students can explore the world of work -
- for a recognition of the range of occupations open to them;
- for an understanding of the nature of work in society, and of its implications for individuals in their life-space as a whole;
- for an appreciation of the effects of social and technological change on the patterns of work, training and employment.

To help students discover their own vocational possibilities by gathering information about careers likely to be suited and available to them, related to their developing self-knowledge and personal growth.

To ensure that students appreciate the opportunity factors that may bear on their career plans, so that they may develop reasonably realistic expectations and aspirations.

3 Decision-making abilities and self-direction

To provide opportunities for tentative goal-setting, and for periodic review of plans and goals, based on developing self-knowledge and opportunity awareness.

To make students increasingly more responsible for finding their own vocational directions, and more independent in their own career decisions.

...

To teach students effective decision-making skills and to foster flexible attitudes to future possibilities, including readiness to review and revise decisions made in the light of new knowledge and experience, and to face future situations which are likely to require "change" decisions.

4 Transition skills and preparedness

To create an awareness of the need to think and plan ahead for working life, and of the relevance of schooling as a preparation for it.

To equip students with study skills to promote their educational achievement at and beyond school, and with personal and social skills, both to facilitate their expanding social relationships and to foster the competencies of independence.

To develop in students a sense of relationship to community as the setting and source of both their future livelihood and their social and leisure activities.

To help students acquire needed skills and an adequate degree of confidence to enable them on leaving school to take the necessary steps to seek and secure an appropriate employment beginning, and to function competently in it.

To give students a knowledge of where and how additional education, training and experience can be acquired, and of sources of help beyond school for vocational or employment questions and problems that may arise.

Guidance Checkpoints

These are a series of points through the student's school life which call for advisory action by various members of the guidance team - form teacher, level tutor, careers adviser or guidance counsellor. In the main these actions are to provide reviews of students' progress and plans, or assistance with choices that need to be made - including, when the time comes, the leaving decision and employment-seeking action.

The guidance checkpoints are listed below with the suggested content for the teaching programme at each level to indicate the continuing complementary advisory activity. They also emphasise that the provision of pastoral care at each level is the key to the complete effectiveness of the career guidance programme.

OUTLINE OF PROGRAMME CONTENT

Level	Content and Guidance Checkpoints
FORM	Theme: THE NEXT STEP - TO THE FUTURE
II	Interesting Occupations: beginnings in gathering knowledge about the world of work Next Step - Secondary School: continuing strands in schooling and new opportunities - primary/secondary similarities and differences Guidance checkpoints: for transition to secondary school - Prospectus/handbook: course/subject/option choices - Secondary enrolment - local procedures - Secondary liaison with Form II teachers: progress/test data; course/class placement - Familiarisation visit; New Parents Evening

Outline of programme content

Level	Content and Guidance Checkpoints
FORM III	Theme: ORIENTATION - SCHOOL AND COMMUNITY

Induction/familiarisation activities: Student Handbook
New school environment: buildings, facilities
Organisation: personnel and functions; class/form/house structures; management and regulation
Guidance staff: personnel, functions, availability

School as a Community: developing personal relationships (beginning at class level); school and student - membership roles and responsibilities; extra-curricular activities - facilities, opportunities, values

Secondary schooling - place in education system; social functions

School in Community: linking organisations and relationships; cultural and recreational opportunities

Study/learning skills: preview courses, subjects, options; subject content and progression, extension/remedial provisions; study skills - independent "home"work

Vocational ideas: some beginnings may be made on Form 4 content - if classes show a readiness for it

Guidance checkpoints

- Progress checks: first half-term; mid-year: adjustment, progress, problems, needs
- Term 3: Form 3-4 subject/option choices or changes

FORM IV — Theme: LOOKING AHEAD - THE WORLD OF WORK

A modular or block unit should be planned to introduce important vocational ideas and approaches to career planning

Work in Society: functions of work; patterns of work in the local community; the labour force in New Zealand - distribution, age/sex structure; the role of trade unions; health and safety at work

Work Satisfaction: various motivations/values; work and wages; need for work-leisure balance

Self-awareness/appraisal: interests, achievements, skills, experience, personal traits, strengths, potentials

Range and variety of occupations: groupings by function, interests etc; interdependence of occupations; levels of skill and responsibility

Sample occupational studies: ways of exploring career ideas using information and first-hand enquiry - from "browsing" to researched project studies

Social change in relation to work: occupational change; changes in the work force; effects on work skills, work activities and work organisation; implications for career planning and aspirations

Employment prospects - the opportunity factors: youth employment; the local scene; possible strategies

Tentative goal-setting: short and long term objectives and what is required for their attainment

Vocational Guidance booklet "Looking Ahead"

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Outline of programme content (cont)

FORM IV (cont)

Guidance checkpoints

- Progress checks: mid-year or earlier - progress, problems, needs
- Identify intending Form 4 leavers: refer to Employment Seekers programme (see Form 5)
- Form 5 course/subject/option choice: educational plans and goals, career implications

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FORM V

Theme: CONTINUING CAREER EXPLORING

The emphasis moves to individual enquiry and re-appraisal - of interests, skills, achievement, academic goals, vocational directions and strategies. Individual counselling is increasingly needed.

Study skills: discipline of planned study; working habits and conditions; specific aids and methods for study and learning; reading and note-taking skills; revision and examination skills

Review of career planning and thinking: Term 1 questionnaire - self-profile, stage of career thinking, information needs, this year/next year goals and plans

Continuing individual enquiry in both range and depth by various approaches: using school information system, careers seminars, visits, speakers; work exploration and work experience for familiarisation with employment environments - see following section D

Further study and training: upper secondary and tertiary study/courses and vocational trainings of all kinds, pre-employment and in-employment; levels of training and qualification; closing dates and applications - preparing as a competitive applicant

Vocational concepts: topics for modules through Forms 5-6:

- Social and technological change: case studies of effects on occupations and working patterns; Women and Work; redundancy and retraining
- Work-related values: working for money, aspiration, job security, job status; employer/workmate relationships
- Decision-making: problem-solving strategy; practice and application to career questions
- Work and leisure - planning for the work-leisure balance; life values of developed leisure activities
- On Your Own: aspects of working life and increasing independence, especially money and legal matters - panels of speakers, including recent leavers

Guidance checkpoints:

- Progress checks: mid-year or earlier - progress, problems, needs
- Review/re-assessment of goals and plans: seminars for end of Term 2:
  (a) Next Year options: leave/return; courses and subjects
  (b) Employment Seekers: job-seeking skills training; finding a beginning; employment and unemployment; sources of help beyond school; adjustment to working life - panels of recent leavers and local employers/ personnel officers

Outline of programme content (cont)

Level	Content and Guidance Checkpoints
FORMS VI-VII	Theme: SELF-DIRECTION AND DECISION-MAKING Emphasis now on developing students' acceptance of responsibility for their own educational and vocational directions, including participation in planning and organising career programme activities. Individual counselling is essential as needs become quite specific and personal. Continued individual research, using information, seminars, speakers, work exploration visiting/work experience; with review of interests, goals, decisions Tertiary/training institutions: liaison officer talks and assistance; visits for familiarisation Study skills: review of needs and methods Values clarification: self-appraisal of life ambitions; influence of social controls and pressures Vocational concepts and vocational development: continue and complete programme of module topics as listed for Form 5 - including aspects of increasing independence, especially orientation to city life for students of rural schools Guidance checkpoints - Progress checks: mid-year or earlier, especially for management of workload at more advanced level, requiring more self-direction - progress, problems - Review/re-assessment of goals and plans: Term 1 questionnaire - Individual counselling and referral (based on needs indicated by questionnaire) - Review of further study and training opportunities: closing dates and tertiary/training liaison visitors provide several occasions for seminar-type reviews with individual follow-up

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STAFF ROLES AND STARTING POINTS

1 For roles and responsibilities of teaching and guidance staff in the career education and guidance programme, see section E

2 Vocational Guidance Centres of the Employment and Vocational Guidance Service (Department of Labour) can provide a variety of career education models and vocational guidance strategies for schools. It is recommended that schools, as they plan for the establishment or further development of comprehensive career education programmes, do so in conjunction with vocational counsellors in their Vocational Guidance Centre.

3 The smaller school: The closer relationships that are possible with smaller numbers will not require the same organisational provisions as will be needed in a large city school. The range and depth of students' needs will however be much the same, so as complete a programme as possible should be developed, making full use of all available school and community resources.

D WORK EXPLORATION

1 Extending Career Education

Work exploration is an important extension of career education, carrying through the curriculum-based investigation of the world of work into first-hand learning experiences in the workplace. This is not only a means of extending occupational knowledge, but can have important values for personal and social development. Work exploration is one way of testing reality against self, as young people come to grips with the complex tasks of vocational preference, eventual choice, and job attainment.

2 Work Exploration Schemes

Two main forms of sampling employment by students still at school have developed in recent years:

a Work Experience: placement for short-term employment induction and experience for students of special classes (established under the Psychological Service) - usually for one day per week for about six weeks or more. Guidelines for the operation and administration of these "official" work experience schemes are set out in Circular Memorandum T73/72, and will continue to apply.

b Work Exploration (Work Orientation, Work Sampling): similar placement of other secondary students in "unofficial" schemes with vocational guidance objectives ie introduction to the world of work, experience of employment environments, development of career ideas and occupational knowledge, and testing of tentative choices.

NOTE A national Student Work Exploration Scheme (SWE) is being established in 1979-80: guidelines for its operation and administration are set out in Department of Education Circular 34/1/64 issued 22 March 1979. All "unofficial" schemes are now required to comply with SWE conditions specified in the circular, the full provisions of which will operate from 1980. It is expected that SWE will effectively co-ordinate all work experience and work exploration activities involving employment placements by providing -

- a a liaison point for all schools, employers and trade unions in the district
- b harmonious relations for work exploration programmes and established work experience classes
- c a means to ensure recognition of educational objectives
- d a means of evaluating SWE programmes

3 Other Forms of Work Exploration

As well as placements for employment experience, work exploration in its broadest definition may take various other forms. These other activities will not come under the SWE requirements, but in some cases (as h, i, j below) consultation with the school or local area SWE co-ordinator will be essential to avoid untimely demands on the local community resources on which the success of all work exploration activities depend.

More specific objectives in work exploration may thus be achieved by such specially arranged activities as -

- a Occupational information browsing in the school careers information centre, or the careers reference room at a

Vocational Guidance Centre, which can be a useful link between the career education programme and work exploration at first hand.

b Holiday or part-time jobs of the student's own arranging.

c Short visits to industry, commerce or tertiary institutions - to look at career clusters eg scientific, artistic, administrative etc; or for school subject extension studies eg mathematics in structural engineering, surveying etc.

d Work experience within the school eg office, laboratory.

e Careers exploring courses arranged by Vocational Guidance Centre - to provide students with a range of occupational visits, often in vacation weeks.

f Careers Evening or similar functions - providing contacts for students with representatives of various occupations.

g Panel conferences with employment representatives, young workers, union representatives etc - for general school-to-work discussion

h Surveys of occupations in a town or city block for local "world of work" investigations: may be a SWE preliminary activity

i "Days in business" schemes - to look at a range of jobs and skills involved in a particular industry or organisation. (This would need to be co-ordinated with SWE.)

j Pre-employment or pre-vocational courses - would probably include elements of work exploration: see section G below.

4 Educational Values of Work Exploration

Effectively organised activities in work exploration can give:

a Experience of adult and social demands - allaying anxieties about work and adults in work situations, and providing opportunities for confidence building, development of the self-concept and growth of self-esteem, experience in self expression to peers and adults, overcoming shyness and improving interpersonal relations in both the classroom and the work place.

b Learning experiences that can help to clarify vocational interests and preferences.

c Psychological as well as social and economic experience - in expanding life-space, previewing coming changes in life style, forming and clarifying values, independence in making decisions, broadening social dimensions - class, ethnic, age group.

d Perception of the relevance of school studies and of work habits and routines.

e Insights into the value of group support - making a new group of friends at the workplace, and returning to one's known class group: both seem crucial ingredients to success and satisfaction in the workplace.

f Functional knowledge and skills involved in future roles - earning a living, raising a family, civic participation

g Beyond-school orientation that may ease problems of

- i isolation from the adult world
- ii lack of opportunities to assume responsibility
- iii limited choices among approaches to learning
- iv relevance and integration of secondary schooling in a technological society
- v intellectual alienation and need for realistic content for thinking

5 Readiness for Work Exploration

To develop needed skills and readiness for learning in work exploration situations, there are different needs at different ages and stages of schooling and development. These must be provided in curriculum-based preparation. Some particular aspects that should have been covered before students embark on any kind of work exploration include:

a Information exploring and gathering skills - selection of relevant details, questions to be asked, noting and reporting skills

b Personal contact skills - customs and courtesies in meeting people, telephone enquiry and interview skills.

c Age-group bridging skills - coping with differences in attitudes and values

d Frames of reference for career thinking - career interest fields, occupational classifications, links between subjects and occupations, self-knowledge and assessment

6. Preparation and Organisation

Work Exploration takes students out of the school and puts them "on their own". If the objectives are to be achieved, there must be careful organisation of the practical arrangements, both within and beyond the school. Students must be well prepared to manage the new situation profitably, and to cope with any contingencies that might arise.

The SWE requirement that parents be fully informed and give written consent could well apply also to less formalised activities and visits, as one way of involving parents in their children's career exploring generally.

For many students of rural schools, it may be very desirable to arrange preliminary "day in town" trips, made with the assistance of parents. Members of service clubs are usually very willing to help in such visits. The arrangements should aim to provide students with experience in finding their feet in the city - familiarisation with busy streets and traffic; using maps, timetables, buses; finding snacks and meals; and perhaps an introduction to a large employing organisation. For students of remoter schools, a first visit to a nearer and smaller centre could also involve some beginning work exploration visiting.

Checklists of organisational details for work exploration and familiarisation visits are available.

E STAFF ROLES AND RESPONSIBILITIES IN THE CAREER EDUCATION AND GUIDANCE PROGRAMME

The developing guidance orientation

Developments in many secondary schools in recent years to meet broader educational objectives have already provided the basic requirements for the implementation of effective career education and guidance programmes. Guidance counsellors have now been appointed to almost all secondary schools, and will play a major part in this.

There has been a growing recognition that beyond meeting scholastic and instructional needs, schools have the further important role and responsibility of contributing positively to the personal growth of all their students, both through teaching programmes and by pastoral care. A greater flexibility in curriculum, together with school-based staff training in broadening the teaching role, are two particular responses which have contributed a guidance orientation in the management policies of many schools. Readiness to draw on community resources and to build closer school-community interaction and relationships has done much to reduce the tendency, particularly of larger city schools, to work in relative isolation from the world of employment and the community at large. All these developments have special relevance for building elements of career education into the school's teaching curriculum.

In schools already working along these lines, responsibility and participation in provisions for personal and career guidance are shared by many staff members. In larger schools, the need to co-ordinate these provisions across various subject and specialist areas, and through all form levels, is recognised in an assigned responsibility. The following description of roles and responsibilities suggests such a pattern of wide staff participation with effective co-ordination for a fully developed programme of career education and guidance in the school. While the "pastoral" roles of form teacher and tutor are concerned mainly with the student's general welfare and progress, they too have links with the career guidance provisions.

1 CAREER EDUCATION AND GUIDANCE ROLES

Career Education Co-ordinator

Develop school programme in career education across subjects and through the form levels, in conjunction with HOD's and teaching staff

Assist subject teachers in planning teaching units, including selection and adaptation of resource material and aids appropriate to particular class groups

Co-ordinate the use of school and community resources needed and available to facilitate the programme and its various teaching units - including visual aids, speakers for seminars or panels, contact suggestions for visits and visitors etc

For practical points in planning and co-ordination, see section A - Developing career education in the school

Note: Work exploration and Work experience: programmes in these activities are required to be operated under Department of Education guidelines. Their co-ordination could be a career education responsibility, or provided separately.

Subject teachers/Heads of Departments

Incorporate career education units in subject courses to contribute to the school programme, as agreed with the co-ordinator
eg Form 4 Social Studies, or Form 4 Social Education, or Form 4 Integrated Studies: block or modular "World of Work" unit
Form 3/4/5/6 English: teaching units in study skills as appropriate to level
English teachers: assist with Employment Seekers' seminar - especially in teaching communication skills of job-seeking: this could be a teaching unit in some Form 5 classes

Planning to teach and evaluate units or modules, including the development and use of resources and aids, with the assistance of the career education co-ordinator and the support of guidance staff for appropriate topics

The practical implementation of a teaching unit for several classes should be the responsibility of one of the subject teachers involved as a syndicate leader ie for production of resource materials, timetabling arrangements needed for shared aids etc

Careers Adviser/Guidance Counsellor/Guidance Teacher

(Guidance Teacher: This role has been established in some schools, including "guidance network" schools, with a half time teaching commitment in a subject area and the other half to an aspect of guidance - career education or social education or careers advising etc. The guidance teacher may thus have a special responsibility or a co-ordinating function in one of the roles described in this section, as arranged in the particular school.)

In schools with two or more careers adviser/guidance counsellor appointments, one should be designated "careers guidance co-ordinator" with oversight for the careers advising provisions as a whole:

Establish and maintain the careers information system, including an "information centre" with reference material directly accessible to students; and a provision for students to borrow copies of particular leaflets for further study

Encourage individual vocational enquiry by providing a variety of further avenues - "review of plans" questionnaires, careers information displays, work observation visits, visiting speakers, "careers evening" etc

Provide individual and group guidance and counselling, including leads for follow-through action such as work observation, making application, developing extra-curricular background for chosen career etc

Refer to liaison or visiting vocational counsellor those students who have difficult problems of choice or opportunity

Provide or arrange guidance action for guidance checkpoints at each form level

Assist in career education programmes, especially when detailed knowledge of occupations or study/training courses is required; or for sessions on self-evaluation, decision-making or career planning

Assistance in job placement and job adjustment counselling may be called for in some locations; assistance of or referral to the Employment and Vocational Guidance Service may be appropriate in many cases

(Guidance Counsellors will also have further personal counselling functions, including referral to specialist sources of help.)

...

2 PASTORAL GUIDANCE ROLES

Form Teacher

Early-year orientation/overview activities, appropriate to year level

Day-to-day pastoral oversight:
- monitor educational progress and personal adjustment
- refer students with course or "other subject" problems to tutor
- provide first-level counselling, and refer students with more difficult problems to appropriate member of guidance staff
- refer intending or likely leavers to careers adviser

Initial work relating to subject choice or options

Provide parents with adequate information concerning both school achievement and personal development of their children

Tutors/Deans (Form Level)

General oversight and assistance in form teacher responsibilities

Co-ordinate maintenance of cumulative student records covering both personal and educational progress information

Monitor educational progress - especially through checkpoint progress assessments: arrange assistance for students with problems and needs

Refer to careers adviser or guidance counsellor those students with career or personal problems

Supervise subject/option choice arrangements, providing individual educational guidance as required

Initiate/supervise early-year orientation or overview activities

At senior levels, provide overview of tertiary courses of study and training, including qualification and bursary information

Guidelines for Career Education

Addendum to: E Staff Roles and Responsibilities (p 15)

Guidance Advisers and Vocational Guidance Counsellors (Employment and Vocational Guidance Service, Department of Labour)

Provide an advisory and support service for schools guidance and teaching staff for the achievement of careers guidance objectives. In particular, to

(a) assist schools develop a continuing career education programme that reaches all students at various levels
(b) assist guidance staff develop a complementary programme to stimulate continuing career enquiry

Continue to develop career education modules and resources, appropriately reflecting the New Zealand work society, recognising the needs of New Zealand students, and adaptable to the particular organisation and curriculum programmes of each school.

Provide individual and group guidance and counselling, including assessment if desirable, for students referred by school guidance staff, and for those who refer themselves.

Identify and encourage resource people in the employment community to assist in the school programme, particularly in expanding student awareness of career opportunities and of the realities of the world of work.

Provide guidance staff and students with current occupational and related educational information, derived from research and planning data, and from continuing contact with workers and work settings in all occupational fields, and with educational and training institutions.

Assist with in-service training of school staff in their respective educational and vocational guidance functions and responsibilities.

Provide continuing sources of guidance help beyond school, and encourage students to avail themselves of these services after they move from secondary school into working life or further study or training.

(In addition to these roles and responsibilities in supporting school careers guidance provisions, vocational guidance counsellors provide a community service in vocational, educational and employment information and counselling for people and groups of all ages, based on district Vocational Guidance Centres.)

F THE ROLE OF PARENTS

Schools have tended to take over rather more of the roles and responsibilities of parents than many see as desirable. Exploring and choosing a career is an area in which many parents do wish to take an active part, and the school's programme should always include activities giving opportunities for parents to be involved.

The "careers evening" arranged by many schools gives one such opportunity, but is often the only planned involvement. Some schools and Vocational Guidance Centres have conducted parents' seminars, covering ways they can help their children plan and prepare for work and life beyond school. For this kind of programme topics could include:

- Ways and means of job exploring, through friends, relatives, workplace visits (including parents' own); holiday, part-time and voluntary jobs
- Sources of occupational and employment information
- Problems in career planning, such as subject choice and requirements, unhelpful pressures, self-knowledge needs
- Sources of help: guidance staff and facilities, at school and beyond school
- Developing work-related attitudes and habits, including handling money, personal responsibility, social skills and relationships
- Balance between work and leisure: need to develop a range of satisfying leisure interests
- Developing background experience, skills, knowledge for a desired training opportunity; preparing applications and developing other job-seeking skills

These practical aspects are examples of the important and influential ways within the family in which parents can contribute to the career guidance of their children. A full statement of the role of parents as models and counsellors is reproduced in Appendix III - The Role of Parents in Career Guidance

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G PRE-EMPLOYMENT AND PRE-VOCATIONAL COURSES

Aim — To prepare young people for entry into employment - both young unemployed and school returners awaiting employment.

Theme — Mutual responsibility: community-school-young jobseeker - a three-way involvement for support and positive action

Content — Content will vary according to the group selected and the term of the course eg terminating pre-employment course, or on-going alternative school course for returners etc

Most courses will contain three important components:

a personal development (including interpersonal relationships)

b vocational development (employment choice and opportunity, job skills, jobseeking skills etc)

c social development (including consumer and community studies)

These courses may be organised within the school or by community agencies. Guidelines are available from Vocational Guidance Centres or the Department of Education.

THE TRANSITION FROM SCHOOL TO WORK: PROBLEMS AND PROVISIONS

A Problems in Youth Employment : What the Reports say

"The transition to working life confronts those leaving the educational or vocational systems in their new stage of life with a set of completely new problems. It enforces decisions which wil greatly influence their future life. The avoidance of unnecessary friction is an essential pre-requisite of successful personal development and social integration.

For several years the integration of young people into working lif has presented increasing difficulties. Remarkable and alarming indicators of this tendency are for instance:

- unemployment or the risk of unemployment
- restricted choice of occupations owing to a lack of vocational education and training opportunities
- mismatch between the character of occupations available and the individual's qualifications and aspirations."

("From Education into Working Life" - Report of the Education Committee, European Communities Commission (EEC) December 197

"Despite their generous expenditure on education in recent years, most governments in industrialised countries still have a youth problem and are attempting to find ways to facilitate the entry of young people into working life. The key features of the present situation reflect both the particular characteristics of the younger generation and those of the world of work:

- there is a gap between the aspirations and expectations of the young and the employment conditions of current production processes;
- there is a discrepancy between initial education and traini received and the actual qualifications required in the various economic sectors as regards knowledge, working habits, attitudes and the capacity to adapt;
- the segmentation of the labour market and the wage and salary structure make it difficult for young people to know what kind of career to pursue;
- there is a divorce between the value system of the industr society and the ideas of young people, which are based o their opinion of society and to some extent on their reluctance to accept its foundations and constraints."

("Entry of Young People into Working Life" - Report drawn fro member-country technical reports: OECD 1977)

"While the present economic outlook is seriously aggravating the problem of jobs for young people, it is neither the sole cause nor the central issue. The causes and issues are:

- a deficit of new jobs
- growing competition for jobs
- inadequate preparation for working life
- young people are a disadvantaged group in the labour market.

("Youth Employment and Unemployment" - OECD "Observer" July 1

B Guidance Provisions for Transition Needs - Two Views

"At one side of the vocation gap stands the school, at the other the employer. What can either do to ease the transition? The school can do two things once it has decided upon the kind of guidance it wishes to provide: it can offer information, and it can offer simulated experience. The initial decision is crucial, for it demands an appreciation of theories of vocational and personal counselling: schools should at least be aware of what it is they are trying to do when they embark upon elaborate work experience schemes or adopt a tutorial system.

Four main points may be offered as cornerstones for a guidance structure that has been commonly adopted in Britain, and which has seemed appropriate to at least one Australian department of education:

1 The preparation for the transition from school to work is a preparation for living and not merely the preparation of a number of individuals for particular jobs.

2 This involves practice in decision-making, some understanding of motivation and need satisfaction, and the promotion of self-awareness with regard to work and leisure needs, and community and personal values.

3 Such preparation should be planned to include all major educational choice points and cover both personal and vocational maturation. Neither personal nor career counselling should be permitted to become mere crisis counselling during the leaving year.

4 To undertake such a task the school needs to involve a large number and perhaps all its staff, including the principal, and some specialists in the area of guidance who will be able to co-ordinate internal school activities and extend the school relationships into the wider community."

("Preparation for the Transition from School to Work" - C J Morgan in The Australian Journal of Education, Vol 21 No 2 June 1977)

Some practical points in guidance for a competitive job market:

1 Make young people aware of the realities of the job market
2 Lead the essential step of confronting one's goals with the likelihood of attaining them
3 Develop decision-making skills for alternative choices and strategies, and for sensible decisions about realities
4 Encourage development of widest possible array of personal skills such as public speaking, sporting abilities, music, drama, group participation and leadership and so on
5 Develop use of community contacts in employment field - such as work experience or holiday work employers, family friends and relatives, community groups and institutions
6 Teach job-seeking skills - writing personal resume, applications, interview; especially the importance of first impressions
7 Encourage voluntary work experience relevant to chosen field - or merely as 'work induction' experience
8 Guide planning in both short and long term where necessary: short-term employment may be needed as stepping-stone for either experience or income
9 Provide ready access to accurate information
10 Encourage use of sources of help beyond the school, especially employment and counselling services

(Summarised from "Counselling Students for a Poor Job Market" - Dick Harvey, Director of Pupil Personnel Services, Department of Education, New Brunswick - in a Canadian journal, mid-1977)

Appendix II

PROPOSITIONS RELATING TO VOCATIONAL DEVELOPMENT AND CAREER EDUCATION

Some points for consideration and discussion

The basic questions for teachers might be:

To what extent can these concepts be relevant to my teaching of my subject?
What contribution do I - can I - make to the vocational development of my students?

1 The meaning of work may be different to different people; basic life satisfactions may be achieved in ways not related to job satisfaction; future work roles are not always known. So - we should not spend our energies helping a person select a specific occupation, but rather to help him become a flexible adult able to cope with inevitable changes.

2 Vocational counselling cannot take place in a vacuum. The student needs information, a conceptual vocabulary, a range of experiences, and a set of decision-making skills. These develop in the normal process of social maturation, so occupational choice is itself a developmental process. Hence the student needs continuing opportunities to grow in self-awareness, in knowledge and experience of the community and the working world, and in personal and social skills required for successful transition from the school years to that community as a functioning member of it.

3 The vocational thinking of young people is influenced by their concern to understand themselves as individuals, to foster an acceptable self-identity, and to commit themselves to clear directions and goals of personal growth. They need opportunities to develop their own values that will help them channel their energies into a satisfying lifestyle and to decide what part work will play in it.

4 Career education can help the school to convey curriculum information to students in a way that is meaningful and sensible to them.

5 Career education teaching units could be concerned with many established curriculum concepts such as -

- social control eg people adapt to opportunities open to them - the influence of "opportunity structures";
- social change eg the influence of traditional values on the capacity of individuals and societies to change their thinking about occupational roles and the place of work;

or with educational values such as -

- influencing aspirations eg expanding opportunities for girls;
- fostering autonomy eg helping students think through their own alternatives to choices suited to their needs and preferences.

6 There can be no distinction between educational and vocational guidance: they are complementary aspects of the one continuing process, and all educational activities have vocational significance

7 For most young people, the secondary school years are the time when the horizons of choice and possibility are most fully and directly open to them.

Appendix III THE ROLE OF PARENTS IN CAREER GUIDANCE

"Without question parents can and should be in the most influential role as models and counsellors to their children. Having some measure of direct control over the environment in which their children have been reared, they have the unique opportunity to expose them to experiences appropriate for self-fulfilment. As their children enter public education, parents share, but do not give up, the responsibility for their development. Parents who take full advantage of the information given them by school staff members concerning the interest, aptitudes, failures and achievements of their children, can use this background of information to provide the following career guidance and counselling:

a Assistance in analysing their children's interests, capabilities and limitations.

b Explanations of the traits required, and working conditions and life styles of workers in work areas with which they are most familiar.

c Discussion of work values developed as a result of past experiences and of the consequences they have experienced.

d Discussions of the economic condition of the family as it applies to the children's education and training needs and assistance in planning a course of action.

e Help in using the experience, knowledge and services of relatives, friends, fellow workers and other resources in exploring the world of work and in planning and preparing for their children's role in the work society.

f Provision of a model and counselling to their children during critical developmental periods of their lives in an attempt to have children establish and maintain positive attitudes towards themselves and others.

g Exemplification of the attitude that all persons have dignity and worth no matter what their position in the world of work.

h Provision of situations that allow children to experience decision-making and to accept responsibility for the consequences of their decisions.

i Maintenance of open communications between school and home so that the experiences of both settings can be used in meeting student needs.

j Provision of opportunities for children to work and accept responsibility of the home and community."

(From "Career Development and Career Guidance." - a National Vocational Guidance Association and American Vocational Association Joint Position Paper.)

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2 April 1981

CIRCULAR 1981/ 37

This circular applies to all state and private secondary and area schools. Inquiries should be addressed to the District Senior Inspector of Secondary Schools.

Officer - Head Office responsibility rests with the Director of Schools.

STUDENT WORK EXPLORATION (SWE)

1 INTRODUCTION

1.1 This circular replaces that of 22 March 1979 which is withdrawn.

1.2 As these guidelines represent the agreement of employment associated organisations to the procedures for the "use" of employment situations as part of the educational process the requirements of this circular relate to all secondary and area schools, both state and private, which use temporary placement in the work environment for enrolled secondary students. The only exceptions are those students enrolled in officially established special classes in primary, secondary and special schools. The conditions and administrative provisions for work experience schemes for these students are set out in Circular Memorandum T73/72 and will remain unchanged.

1.3 This circular contains three sections:

Part I sets out the Aims of the Guidelines and briefly reviews the considerations which have prompted the establishment of a national Student Work Exploration Scheme (SWE) as a co-operative enterprise involving schools, government agencies and employer and employee organisations.

Part II sets out the organisation of the scheme at local, district, and national level. This is shown diagrammatically in Appendix A and a list of districts is supplied in Appendix B with a map of the Trades Council districts.

Part III sets out the Operating Procedures to be followed by schools (see Appendix C). Extracts from relevant legislation are attached in Appendix D.

PART I

Aims of guidelines

2.1 The purpose of establishing agreed guidelines for this programme is:

a to assist schools in their endeavours to help students prepare for their transition from school to work;

b to recognise the essential elements of co-operation and consultation needed among employers, employees and schools to enable students to move temporarily out of the school setting into the employment environment;

c to establish work exploration on a firm basis, officially recognised as a co-operative venture between the educational and employment sectors for the educational benefit of the young people of the country;

d to encourage the further development of student work exploration on a planned basis, taking account of both school and employer resources and responsibilities;

e to encourage dialogue between schools and employer and employee groups so that each can develop a better understanding of the needs and purposes of the other;

f to identify any difficulties and establish methods to resolve them.

2.2 Comment:

There is widespread recognition and support for the idea and value of work exploration. Not only does it assist young people to gain an appreciation and understanding of the employment environment which will assist them in making vocational choices and decisions, but it also provides social experiences and motivational objectives of a different dimension from those available within the school. In this way the employment sector can provide a valuable extension and contribution to the educational process.

Many schools have already recognised this and since the implementation of the Accident Compensation Act removed the obstacle of insurance have, with the goodwill of local employers, initiated informal arrangements for their students.

This school-community relationship is recognised to be a critical ingredient which will always form the basis of the operation of any scheme which enables a student to move out of the school into the employment environment. For an effective and successful development of student work exploration however, the additional component of community responsibility for the safety and welfare of young people in the work scene also has to be considered.

This involves not only individual schools and employers but their associated organisations which also have roles relating to the responsibility assumed by schools and employers. In the case of schools, their boards, teachers and parents and the PPTA or AHIS and the Department of Education are involved. Employers similarly have a liability under legislation which involves the interest of their own Federation and the Department of Labour in the welfare of young people in the employment environment. Employee organisations have a similar interest and involvement.

It is in this area of responsibility, that concern has arisen. At times employers, in co-operating with schools, have been placed in situations which contravene their legal obligations. Difficulties have already arisen and as the informal schemes are expanded the potential for problems is increased.

To avoid jeopardising the co-operation which exists at the national level and without which schools would be unable to use the employment environment it has become essential to establish agreed guidelines and procedures.

The intention in doing this is to provide the support and advice which will ensure that schools are able to continue to develop their schemes and have available, assistance to avoid difficulties and procedures to resolve them, if they arise.

3 PART II - ORGANISATION (See Appendix A - Organisationsl Chart)

3.1 Organisational Areas

a Local: These will be based on suitable geographic areas in relation to the location of participating schools (eg, Hutt Valley - 2 areas, Lower Hutt and Upper Hutt; Queenstown - 1 school, 1 area).

b District: These will be based on the Trades Council districts (see Appendix B). Buller Canterbury West Coast Timaru Oamaru

c National.

3. 2 The national oversight of the SWE scheme is the responsibility of an advisory committee to the Minister of Educoation on which all participating groups are represented. There are four clearly defined groups involved in the organisation of the SWE scheme - schools, government agencies; employer organisations and employee organisations. Although the major involvement of schools will be at the local level it is important that they also appreciate both the role and the organisation of the other groups involved in the scheme.

3. 3 Schools: The development of the SWE scheme in local areas is dependent on the initiative of individual schools. For areas where more than one school operates there will need to be consultation and co-operation to prevent unfair demands being made on local employers and to ensure fair access to placements for all participating schools and protection of placements used for work experience schemes. Responsibility for this co-ordination rests with the participating schools and their liaison inspectors.

In order to carry out the consultative process participating schools will convene an annual meeting of parties involved at the local level to review the scheme and discuss future plans and wider issues. Principals, PPTA and SSBA represent the interests of schools at district level and PPTA and SSBA are members of the national advisory committee.

3. 4 Government Agencies:

a Department of Education: Liaison inspectors work with individual schools under a designated inspector with supervisory responsibility for SWE in each secondary school.

The DSISS has the overall responsibility:

i to ensure that all schemes are organised with sound educational objectives and adequate arrangements for supervision and integration into school programmes and with provision where necessary for co-ordination with other local schools, before granting approval;

ii to convene at least annually a meeting of each district committee to review work exploration schemes and recommend new developments and to consider the relationship between education and employment and the transition from school to work. These committees report to the national advisory committee. In addition to representatives of the National Advisory Committee organisations, district committees should co-opt members to represent the needs of special groups eg girls, Maori and Island pupils, disabled pupils or others relevant to the local community eg Federated Farmers.

b Department of Labour: Through its factory inspectors the Department of Labour ensures that all student placements comply with labour legislation. Its officers and visiting vocational guidance counsellors are available for advice and consultation by schools as necessary.

3.5 Employer Organisations:

The national organisations represented on the advisory committee are:

the Employers' Federation in the private sector and

the State Services Co-ordinating Committee in the government sector

These organisations will nominate district representatives who have three responsibilities:

a to act as members of the district committee convened by the DSISS with the functions provided in 3.4(a)(ii)

b to act as information agents within employers' organisations

c to provide advisers to the DSISS in the event of unresolved local problems and to help in their solution.

The local employers will be contacted directly by individual schools. Before inviting their participation schools will be required to explain the objectives of their scheme and the types of assistance sought by the school. Where applicable employers will also be asked to provide the school with the name of the appropriate spokesperson in their place of business who represents the local Trades Council.

3.6 Employee Organisations:

The national organisations represented on the advisory committee are

the Federation of Labour in the private sector; and

the Combined State Unions in the government sector

At district level they will nominate representatives of local Trades Councils and the Combined State Unions to act as members of the district committee convened by the DSISS with the functions provided in 3.4(a)(ii). In the event of unresolved problems they may nominate specific advisers to assist the DSISS as required. These

representatives could also act as information agents within Trades Councils and State Unions. At the local level nominees of Trades Councils (and where applicable, of appropriate Trade Unions) and the Combined State Unions will be available to help resolve problems and to meet annually with local schools and employers to review schemes and consider future plans. Within each participating firm (where applicable) a union representative will be nominated as the employee contact person to liaise with the school as necessary.

PART III - OPERATION (See Appendix C)

4.1 Decision to Participate

The decision to have students involved in work exploration rests with the school. In making this decision there are a number of aspects to be considered:

a The resources of the school to provide the necessary support and provision of adequate time for preparation and follow up work.

b The resources available in the community to provide placement opportunities.

c The development of the essential administrative and communication requirements with all parties involved to co-ordinate (a) and (b) above.

d The identification of those students or groups of students who will gain education benefit from such activities as: obtaining a greater awareness of the work environment; mixing and working with adults of all ages who may have aims, values and social organisations with which they are unfamiliar; increasing understanding of industrial and commercial life; gaining an appreciation of the skills involved in employment; testing the reality of a vocational choice.

4.2 Planning

Work exploration is an extension of the vocational development role of the school carrying through the curriculum based programme with first hand learning experiences in the work place. It is not an alternative to the school's guidance programme but an important part of it, which can frequently provide a student with a new view of himself or herself as an aid to personal and social growth.

Preparation to participate therefore involves both in-school and out-of-school considerations.

The establishment of clear educational objectives and the development of an in-school programme to support these is necessary. The contribution which can be made to the internal programme by employers, employees, Department of Labour personnel, etc should be assessed and incorporated where appropriate.

4.3 Application to Participate

When the planning is completed the proposal must be submitted to the district senior inspector of secondary schools for his approval to operate the scheme.

Sufficient information must be included to indicate:

a the organisation of the programme. This will include details of the groups of students to be involved, the criteria for their selection, the numbers involved and the objectives for each group. It will also outline the preparatory and follow-up vocational orientation programme used in the school;

b that parents' approval will be obtained before a pupil participates;

c that there is a contact person with overall responsibility for co-ordinating the programme in the school and with employers and interested organisations;

d clear details of the time to be spent by students on the Student Work Exploration scheme outside the school;

e that adequate supervision of students has been arranged;

f that there is no payment to students or the schools for work done;

g that arrangements for evaluating the scheme have been made in the school.

4.4 Implementation of Scheme

When the DSISS is satisfied about a school's plans and arrangements to comply with the above requirements, he will give his approval to proceed.

Once a school has received this approval and has provided copies of the scheme to the district representatives of employee and employer organisations (see Appendix B) it can proceed to make placements.

4 .5 Arrangement of Placements

When a placement is being arranged with an employer, both the purpose the school hopes to achieve by the placement and adequate relevant information to enable the employer to judge an appropriate experience for the student is to be provided by the school. Where applicable, the school contact person should also meet the trade union contact person within the organisation. If the placement is in a government organisation eg the Post Office or a government department, enquiry should be made about the appropriate CSU representative.

It is the responsibility of a school to establish and maintain a record of placements which includes both the name of the employer, the type of business and (where applicable) the name of the trade union representative. At the end of each term a school should provide a list of its placements to the district nominee of the Employers Federation, the appropriate office of the State Services Commission and the secretary of the local Trades Council. (See Appendix B.)

4 .6 Co-ordination with Other Schools

In localities where more than one school could be approaching employers in the community it is essential that schools develop a system of communication among themselves to be aware of the placement situation and to evolve a method of:

a protecting the placements of special class students;

b sharing the placements in a firm or organisation which provides exploration of a particular occupation eg the hospital;

c avoiding too many demands on individual employers;

d enabling a school which has not previously had a work exploration scheme to participate. Where an equitable arrangement cannot be achieved the DSISS will need to intervene.

4.7 The Role of Parents

The role of parents is important and it is the responsibility of the school to explain the purpose of any scheme to the parents of each student concerned and to gain their written consent to participation.

This consent must include a statement of the student's general standard of health including any physical disability or medical condition to allow the school to

arrange an appropriate placement. It is important that no student is involved in work for which he/she is unsuited on medical grounds. Pupils with disabilities should not be excluded from participation but extra care needs to be taken with their placement.

The Department of Health should be consulted in cases where there is any doubt about physical fitness for work and their advice sought on suitable work situations.

4.8 Students Under 15 Years of Age (See Appendix D)

Plans for including students under 15 years of age must be made in relation to relevant labour legislation. The Factories Act precludes anyone under 15 years of age being engaged on the premises of a registered factory.

4.9 Certificate of Fitness (See Appendix D)

It is a legal requirement of the Factories Act that persons between the ages of 15 and 16 must have a certificate of fitness before they may commence work.

To enable students between 15 and 16 years of age to participate in areas of work covered by the Factories Act the Department of Labour has agreed to issue temporary certificates of fitness on the basis of a statement from the school which, in turn, is based on the information provided by the parents about a student's health. Temporary certificates of fitness issued for Work Exploration may not be used for paid employment during school holidays or after school.

Schools must supply the district officer of the Department of Labour (see Appendix B) with a list of the appropriate information about each student including the name of the firm with which he/she is being placed.

4.10 Complying with Conditions

a Safety: Safety in the work place is a combined responsibility. Employers will be expected to apply to visiting students the safety requirements of the work being performed. School programmes must also make students aware of safety rules and procedures in the work place. Information about the resources available will be issued to schools.

b Payment: No payment is to be made by employers to students or to the school in respect of work done. Although pupils should be given placements that are clearly worthwhile they cannot be engaged under a contract of employment and must not be paid.

c . General: The school should become familiar with major legislative requirements which affect the employment of young people - particularly under the Factories Act, the Machinery Act, the Agricultural Workers Act and the Accident Compensation Act (see Appendix D). Department of Labour inspectors are willing to be consulted and will outline the main points of which schools need to be aware. The existing legislation is designed to safeguard the health and welfare of young people and it is therefore a responsibility of all concerned with the SWE scheme to ensure that its requirements are met.

4 .11 Problem Situations

If any problem arises in relation to an employment placement, any of the interested parties may initiate enquiries, first at the local level with the school. At the request of any party a student must be withdrawn immediately until the problem is resolved.

If a solution is not found the matter is to be referred to the district senior inspector and his district advisers nominated by employer and employee organisations (see paras 3.4 and 3.5).

4 .12 Employers' Assessments

Schools can invite employers to make assessments of students placed under the SWE scheme. Experience has shown that young people frequently react quite differently in the new situation and the employer's comment and assessment provide an extra dimension to the school's knowledge of a student. While there is no obligation on an employer to provide an assessment, if one is given it should be made known to teachers and guidance staff involved with the student so it can be used to the student's benefit.

4.13 Communication and Review

An effective SWE scheme that recognises the co-operation of all parties involved is the objective of the guidelines. Schools should use the opportunity provided by the local meeting to discuss their plans and objectives with employers and employees rather than simply to resolve problems. The positive role for all parties is to exchange viewpoints on the transitional needs of young people and to devise co-operative local initiatives (Refer to Para 3.3).

The SWE scheme will be kept under constant review. At the local level a review of the past year and plans for the following year will be part of the agenda of the annual meeting. Liaison inspectors will keep the DSISS informed of the operation of the scheme in schools with which they are associated.

At the district level in addition to reports from district committees, representatives on the national advisory committee will obtain "feed back" from their own organisations so that any adjustments which may be required can be considered and the Minister of Education kept informed.

J A Ross
for Director-General of Education